				F UTAH TURAL RESO BAS AND MII				AMENI	FC DED REPOI	RM 3					
		AF	PLICATION FO	OR PERMI	IT TO DRILL					1. WELL NAME and NU		921-36J1	cs		
2. TYPE O	F WORK	DRILL NEW WELL	REENTER	P&A WELL	DEEPEN	WELL (	)			3. FIELD OR WILDCAT	<b>r</b> NATURAL	.BUTTES			
4. TYPE O	F WELL	G	as Well Co	nalhed Meth	nane Well: NO					5. UNIT or COMMUNIT	TIZATION	AGREEN	ENT NAM	1E	
6. NAME (	F OPERATOR		KERR-MCGEE OIL							7. OPERATOR PHONE	720 92	0-6515			
8. ADDRE	SS OF OPERAT					9. OPERATOR E-MAIL	_	anadarko	com						
	AL LEASE NUM		P.O. Box 173779	11. MI	NERAL OWNERS	CT0				12. SURFACE OWNERS	SHIP		_		
ML 22265  13. NAME OF SURFACE OWNER (if box 12 = 'fee')							STATE (	) FEE		14. SURFACE OWNER	DIAN ()	(if box 12		EE(_)	
												`			
15. ADDRESS OF SURFACE OWNER (if box 12 = 'fee')										16. SURFACE OWNER	K E-MAIL	(IT DOX 12	= Tee')		
	N ALLOTTEE O := 'INDIAN')	R TRIBE NAME		MULTI	TEND TO COMM IPLE FORMATION (Submit C	NS	RODUCTION	-		19. SLANT  VERTICAL DIF	RECTION	AL 📵 H	HORIZONT	ΓAL 💮	
20. LOC	TION OF WELL	-		FOOTAGE	s	QTR	R-QTR	SECTIO	N	TOWNSHIP	R/	ANGE	ME	RIDIAN	
LOCATIO	N AT SURFACE		2118 FSL 1784 FEL			NV	WSE	36		9.0 S	2.	1.0 E		S	
Top of Uppermost Producing Zone 2303 FSL 1800 FEL				00 FEL	NV	WSE	36		9.0 S	2	1.0 E		S		
At Total Depth 2303 F			3 FSL 180	00 FEL	NV	WSE 36		9.0 S	2	1.0 E		S			
21. COUNTY  UINTAH  22. DISTANCE TO NEAREST						REST LEA		et)		23. NUMBER OF ACRE	ES IN DRI		IT		
25. DISTANCE TO NEAREST (Applied For Drilling or Co							leted)	POOL		26. PROPOSED DEPTI MD:	<b>H</b> 10551	TVD: 105	45		
27. ELEVATION - GROUND LEVEL 28. BOND NUMBER						22013	3542			29. SOURCE OF DRIL WATER RIGHTS APPR		MBER IF A	PPLICAB	LE	
					Hole, Casing	, and Ce	ement Infor	mation							
String	Hole Size	Casing Size	Length	Weight	Grade & T		Max Mu							Weight	
Surf	12.25	8.625	0 - 2620	28.0	J-55 LT	T&C	0.2	2		Type V Class G		180 270	1.15	15.8 15.8	
Prod	7.875	4.5	0 - 10551	11.6	HCP-110	LT&C	13.	0	Prei	mium Lite High Stre	ngth	320	3.38	12.0	
										50/50 Poz		1520	1.31	14.3	
					A	TTACHN	MENTS								
	VEF	RIFY THE FOLLO	WING ARE AT	TACHED I	N ACCORDAN	ICE WITH	H THE UTA	H OIL AND	GAS	CONSERVATION G	ENERA	L RULES			
<b>w</b> w	ELL PLAT OR M	AP PREPARED BY	LICENSED SURVE	YOR OR E	NGINEER		<b>✓</b> COMP	LETE DRILLI	ING PI	_AN					
AF	FIDAVIT OF STA	ATUS OF SURFACE	OWNER AGREEN	IENT (IF FE	EE SURFACE)		FORM	5. IF OPERA	TOR IS	S OTHER THAN THE LE	EASE OW	NER			
<b>I</b> ✓ DII	RECTIONAL SU	RVEY PLAN (IF DIR	ECTIONALLY OF	HORIZON	TALLY DRILLED	)	торос	GRAPHICAL I	MAP						
NAME Da	anielle Piernot			TITLE R	egulatory Analys	t		PHONE	₹ 720	929-6156					
SIGNATU	RE			DATE 12	2/20/2011			EMAIL	danie	lle.piernot@anadarko.d	com				
	BER ASSIGNED 047522550			APPROV	/AL			3	Do	20 Eyill					
										Permit Manager					

Morgan State 921-36J Pad Drilling Program
1 of 9

## Kerr-McGee Oil & Gas Onshore. L.P.

## **MORGAN STATE 921-36J1CS**

Surface: 2118 FSL / 1784 FEL NWSE BHL: 2303 FSL / 1800 FEL NWSE

Section 36 T9S R21E

Unitah County, Utah Mineral Lease: ML-22265

#### **ONSHORE ORDER NO. 1**

#### **DRILLING PROGRAM**

## 1. & 2.a <u>Estimated Tops of Important Geologic Markers</u>: <u>Estimated Depths of Anticipated Water, Oil, Gas, or Mineral Formations</u>:

<u>Formation</u>	<u>Depth</u>	<u>Resource</u>
Uinta	0 - Surface	
Green River	1,375'	
Birds Nest	1,673'	Water
Mahogany	2,169'	Water
Wasatch	4,617'	Gas
Mesaverde	7,280'	Gas
Sego	9,451'	Gas
Castlegate	9,516'	Gas
MN5	9,945'	Gas
TVD =	10,545'	
TD =	10,551'	

2.c Kerr McGee Oil & Gas Onshore LP (Kerr McGee) will either drill to the the Blackhawk formation, which is part of the Mesaverde formation, or the Wasatch/Mesaverde formation. If Kerr McGee drills to the Blackhawk formation (part of the Mesaverde formation), please refer to MN5 as the bottom formation. The attached Blackhawk Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the deeper formation.

If Kerr McGee drills to the Wasatch/Mesaverde formation please refer to Sego as the bottom formation. The attached Wasatch/Mesaverde Drilling Program includes Total Vertical Depth, Total Depth, and appropriate casing and cement programs for the depths the Wasatch/Mesaverde formations are found.

## 3. <u>Pressure Control Equipment</u> (Schematic Attached)

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

API Well Number: 43047522550000

Morgan State 921-36J Pad

Drilling Program
2 of 9

## 4. Proposed Casing & Cementing Program:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

### 5. <u>Drilling Fluids Program:</u>

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

### 6. <u>Evaluation Program</u>:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program

## 7. <u>Abnormal Conditions</u>:

## 7.a Blackhawk (Part of Mesaverde Formation) Target Formation

Maximum anticipated bottom hole pressure calculated at  $10545^{\circ}$  TVD, approximately equals 6,960 psi (0.66 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 4,688 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

## 7.b Wasach/Mesaverde Target Formation

Maximum anticipated bottom hole pressure calculated at 9451' TVD, approximately equals 6,049 psi (0.64 psi/ft = actual bottomhole gradient)

Maximum Anticipated Bottom Hole Pressure (MABHP) = Pore Pressure at TD

Maximum anticipated surface pressure equals approximately 3,956 psi (bottom hole pressure minus the pressure of a partially evacuated hole calculated at 0.22 psi/foot, per Onshore Order No. 2).

Per Onshore Order No. 2 - Max Anticipated Surf. Press.(MASP) = (Pore Pressure at next csg point-(0.22 psi/ft-partial evac gradient x TVD of next csg point))

### 8. Anticipated Starting Dates:

Drilling is planned to commence immediately upon approval of this application.

#### 9. <u>Variances:</u>

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program Onshore Order #2 – Air Drilling Variance

Kerr-McGee Oil & Gas Onshore LP (KMG) respectfully requests a variance to several requirements associated with air drilling outlined in Onshore Order 2

- Blowout Prevention Equipment (BOPE) requirements;
- · Mud program requirements; and
- Special drilling operation (surface equipment placement) requirements associated with air drilling.

Morgan State 921-36J Pad Drilling Program

This Standard Operating Practices addendum provides supporting information as to why KMG current air drilling practices for constructing the surface casing hole should be granted a variance to Onshore Order 2 air drilling requirements.

The reader should note that the air rig is used only to construct a stable surface casing hole through a historically difficult lost circulation zone. A conventional rotary rig follows the air rig, and is used to drill and construct the majority of the wellbore.

More notable, KMG has used the air rig layout and procedures outlined below to drill the surface casing hole in approximately 675 wells without incident of blow out or loss of life.

#### **Background**

In a typical well, KMG utilizes an air rig for drilling the surface casing hole, an interval from the surface to surface casing depths, which varies in depth from 1,700 to 2,800 feet. The air rig drilling operation does not drill through productive or over pressured formations in KMG field, but does penetrate the Uinta and Green River Formations. The purpose of the air drilling operation is to overcome the severe loss circulation zone in the Green River known as the Bird's Nest while creating a stable hole for the surface casing. The surface casing hole is generally drilled to approximately 500 feet below the Bird's Nest.

Before the surface air rig is mobilized, a rathole rig is utilized to set and cement conductor pipe through a competent surface formation. Generally, the conductor is set at 40 feet. In some cases, conductor may be set deeper in areas that the surface formation is not found competent. This rig also drills the rat and mouse holes in preparation for the surface casing and production string drilling operations.

The air rig is then mobilized to drill the surface casing hole by drilling a 12 1/4 inch hole for the first 200 feet, then will drill a 11inch hole to just above the Bird's Nest interval with an air hammer. The hammer is then tripped and replaced with a 11 inch tri-cone bit. The tri-cone bit is used to drill to the surface casing point, approximately 500 feet below the loss circulation zone (Bird's Nest). The 8-5/8 inch surface casing is then run and cemented in place, thereby isolating the lost circulation zone.

KMG fully appreciates Onshore Order 2 well control and safety requirements associated with a typical air drilling operations. However, the requirements of Onshore Order 2 are excessive with respect to the air rig layout and drilling operation procedures that are currently in practice to drill and control the surface casing hole in KMG Fields.

#### Variance for BOPE Requirements

The air rig operation utilizes a properly lubricated and maintained air bowl diverter system which diverts the drilling returns to a six-inch blooie line. The air bowl is the only piece of BOPE equipment which is installed during drilling operations and is sufficient to contain the air returns associated with this drilling operation. As was discussed earlier, the drilling of the surface hole does not encounter any over pressured or productive zones, and as a result standard BOPE equipment should not be required. In addition, standard drilling practices do not support the use of BOPE on 40 feet of conductor pipe.

### Variance for Mud Material Requirements

Onshore Order 2 also states that sufficient quantities of mud materials shall be maintained or readily accessible for the purpose of assuring adequate well control. Once again, the surface hole drilling operations does not encounter over pressured or productive intervals, and as a result there is not a need to control pressure in the surface hole with a mud system. Instead of mud, the air rigs utilize water from the reserve pit for well control, if necessary. A skid pump which is located near the reserve pit (see attachment) will supply the water to the well bore.

## Variance for Special Drilling Operation (surface equipment placement) Requirements

Onshore Order 2 requires specific safety distances or setbacks for the placement of associated standard air drilling equipment, wellbore, and reserve pits. The air rigs used to drill the surface holes are not typical of an air rig used to drill a producing hole in other parts of the US. These are smaller in nature and designed to fit a KMG location. The typical air rig layout for drilling surface hole in the field is attached.

Morgan State 921-36J Pad Drilling Program
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Typically the blooie line discharge point is required to be 100 feet from the well bore. In the case of a KMG well, the reserve pit is only 45 feet from the rig and is used for the drill cuttings. The blooie line, which transports the drill cuttings from the well to the reserve pit, subsequently discharges only 45 feet from the well bore.

Typically the air rig compressors are required to be located in the opposite direction from the blooie line and a minimum of 100 feet from the well bore. At the KMG locations, the air rig compressors are approximately 40 feet from the well bore and approximately 60 feet from the blooie line discharge due to the unique air rig design. The air compressors (see attachment) are located on the rig (1250 cfm) and on a standby trailer (1170 cfm). A booster sits between the two compressors and boosts the output from 350 psi to 2000 psi. The design does put the booster and standby compressor opposite from the blooie line.

Lastly, Onshore Order 2 addresses the need for an automatic igniter or continuous pilot light on the blooie line. The air rig does not utilize an igniter as the surface hole drilling operation does not encounter productive formations.

## Variance for FIT Requirements

KMG also respectfully requests a variance to Onshore Order 2, Section III, Part Bi, for the pressure integrity test (PIT, also known as a formation integrity test (FIT)). This well is not an exploratory well and is being drilled in an area where the formation integrity is well known. Additionally, when an FIT is run with the mud weight as required, the casing shoe frequently breaks down and causes subsequent lost circulation when drilling the entire depth of the well.

### Conclusion

The air rig operating procedures and the attached air rig layout have effectively maintained well control while drilling the surface holes in KMG Fields. KMG respectfully requests a variance from Onshore Order 2 with respect to air drilling well control requirements as discussed above.

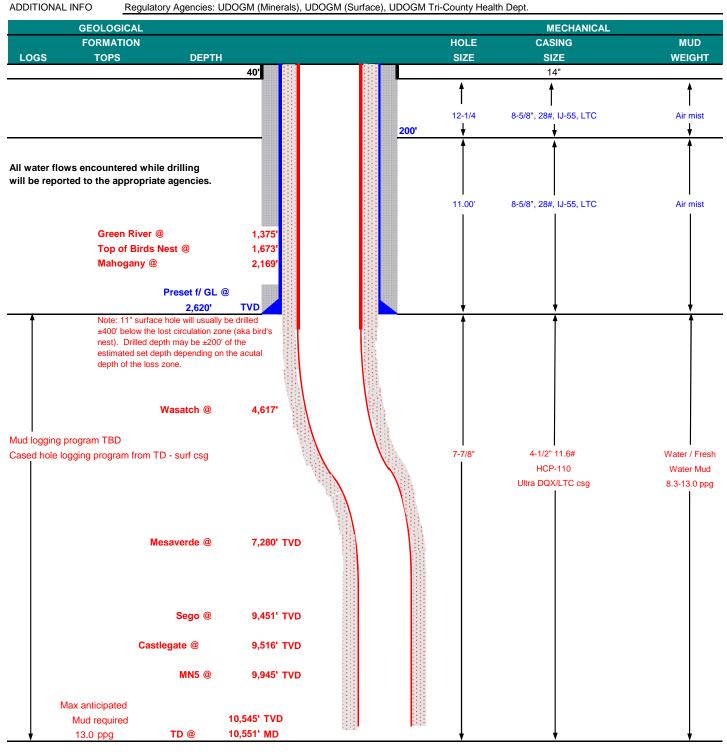
## 10. Other Information:

Please refer to the attached Blackhawk Drilling Program and the Wasatch/Mesaverde Drilling Program



# KERR-McGEE OIL & GAS ONSHORE LP BLACKHAWK DRILLING PROGRAM

COMPANY NAME KER	R-McGEE OIL &	CAS ONSHORE	I D		DATE	December	10 2011		
	RGAN STATI			TD	10,545' TVD		10,551' MD		
FIELD Natural Butte	ELD Natural Buttes COUNT			STATE Utal	h FINISHED ELEVATION		5,053'		
SURFACE LOCATION	NWSE	2118 FSL	1784 FEL	Sec 36	T 9S	R 21E			
	Latitude:	39.991235	Longitude	: -109.496	6339		NAD 27		
BTM HOLE LOCATION	NWSE	2303 FSL	1800 FEL	Sec 36	T 9S	R 21E			
	Latitude:	39.991744	Longitude	: -109.496	397		NAD 27		
OBJECTIVE ZONE(S)	BLACKHAWK								
ADDITIONAL INFO	Regulatory Age	ncies: LIDOGM (	Minerale) LIDC	CM (Surface	) TIDOG	M Tri-County F	lealth Dent		





## KERR-McGEE OIL & GAS ONSHORE LP BLACKHAWK DRILLING PROGRAM

CASING PROGRAM	<u>1</u>	DESIGN FACTORS									
										LTC	DQX
	SIZE	INT	INTERVAL W			GR.	CPLG.	BURST	COLLAPSE	TE	NSION
CONDUCTOR	14"	(	0-40'								
								3,390	1,880	348,000	N/A
SURFACE	8-5/8"	0	to	2,620	28.00	IJ-55	LTC	2.05	1.53	5.42	N/A
								10,690	8,650	279,000	367,174
PRODUCTION	4-1/2"	0	to	5,000	11.60	HCP-110	DQX	1.19	1.21		3.74
	4-1/2"	5,000	to	10 551'	11.60	HCP-110	LTC	1 10	1 21	5 41	

**Surface Casing:** 

(Burst Assumptions: TD = 13.0 ppg) 0.73 psi/ft = frac gradient @ surface shoe

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 9000 psi) 0.66 psi/ft = bottomhole gradient

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

#### **CEMENT PROGRAM**

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGHT		YIELD				
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15				
Option 1		+ 0.25 pps flocele									
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15				
		+ 2% CaCl + 0.25 pps flocele									
SURFACE		NOTE: If well will circulate water to surface, option 2 will be utilized									
Option 2 LEAD	2,120'	65/35 Poz + 6% Gel + 10 pps gilsonite	200	35%	11.00		3.82				
		+ 0.25 pps Flocele + 3% salt BWOW									
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15				
		+ 0.25 pps flocele									
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15				
PRODUCTION LEAD	4,111'	Premium Lite II +0.25 pps	320	35%	12.00		3.38				
		celloflake + 5 pps gilsonite + 10% gel									
		+ 0.5% extender									
TAIL	6,440'	50/50 Poz/G + 10% salt + 2% gel	1,520	35%	14.30		1.31				
		+ 0.1% R-3									

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

## **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

## **ADDITIONAL INFORMATION**

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys	will	be	taken	at	1	,000'	minimum	interval	S

Most rigs have PVT System for mud monitoring. If no PVT is available, visual monitoring will be utilized.

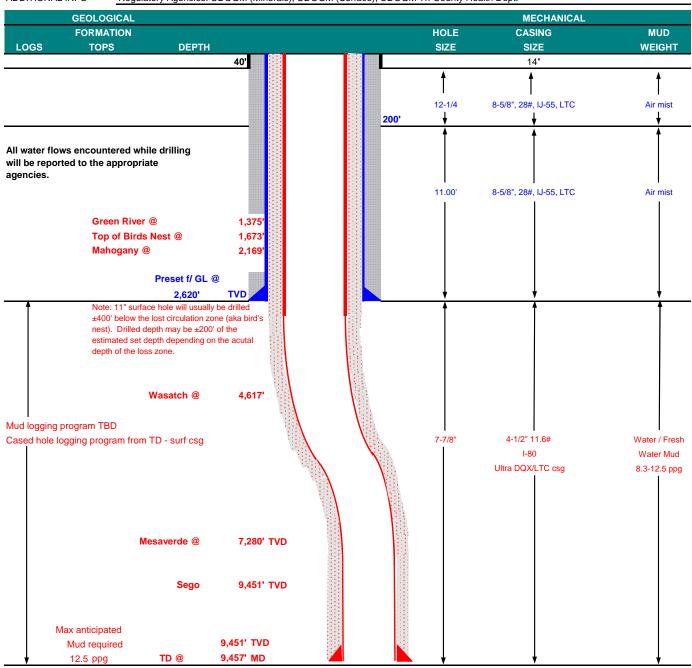
	wost figs have PVT System for muc	monitoring. If no PVT is available, visual monitoring will be utilized.		
DRILLING	ENGINEER:		DATE:	
		Nick Spence / Danny Showers / Chad Loesel	_	
DRILLING	SUPERINTENDENT:		DATE:	
		Kenny Gathings / Lovel Young	_	

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained



# KERR-McGEE OIL & GAS ONSHORE LP WASATCH/MESAVERDE DRILLING PROGRAM

COMPANY NAME KER	R-McGEE OIL	& GAS ONSHOR	E LP	DATE	December					
WELL NAME MO	RGAN STA	ΓΕ 921-36J1C	S	TD	9,451'	TVD	9,457' MD			
FIELD Natural Butte	S	COUNTY	Uintah ST	TATE Utah	FINIS	SHED ELEVATION_	5,053'			
SURFACE LOCATION	NWSE	2118 FSL	1784 FEL	Sec 36 T 9S	R 21E					
	Latitude:	39.991235	Longitude:	-109.496339		NAD 27				
BTM HOLE LOCATION	NWSE	2303 FSL	1800 FEL	Sec 36 T 9S	R 21E					
	Latitude:	39.991744	Longitude:	-109.496397		NAD 27				
OBJECTIVE ZONE(S)	Wasatch/Mesaverde									
ADDITIONAL INFO	Regulatory A	gencies: UDOGM	(Minerals), UDO	GM (Surface), UDC	GM Tri-County	/ Health Dept.				
GEOLOG	SICAL					MECI	HANICAL			





## **KERR-McGEE OIL & GAS ONSHORE LP**

WASATCH/MESAVERDE DRILLING PROGRAM

#### **DESIGN FACTORS** CASING PROGRAM LTC DQX **BURST** COLLAPSE TENSION **INTERVAL** CPLG. SIZE WT. GR. CONDUCTOR 0-40' 14" 1,880 3,390 348,000 N/A SURFACE 8-5/8" 0 2,620 28.00 **IJ-55** LTC 2.05 1.53 N/A to 5.42 7,780 6,350 267,035 **PRODUCTION** 4-1/2" 0 5,000 11.60 I-80 DQX 1.11 1.03 3.01 7.780 6,350 223.000 I-80 4-1/2" 5,000 9,457 11.60 LTC 1.11 1.03 5.33

**Surface Casing:** 

(Burst Assumptions: TD = 12.5 0.73 psi/ft = frac gradient @ surface shoe ppg)

Fracture at surface shoe with 0.1 psi/ft gas gradient above

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

Production casing:

(Burst Assumptions: Pressure test with 8.4ppg @ 7000 0.64 psi/ft = bottomhole gradient psi)

(Collapse Assumption: Fully Evacuated Casing, Max MW) (Tension Assumptions: Air Weight of Casing\*Buoy.Fact. of water)

## CEMENT PROGRAM

	FT. OF FILL	DESCRIPTION	SACKS	EXCESS	WEIGH	łT	YIELD		
SURFACE LEAD	500'	Premium cmt + 2% CaCl	180	60%	15.80		1.15		
Option 1		+ 0.25 pps flocele							
TOP OUT CMT (6 jobs)	1,200'	20 gals sodium silicate + Premium cmt	270	0%	15.80		1.15		
		+ 2% CaCl + 0.25 pps flocele							
SURFACE	NOTE: If well will circulate water to surface, option 2 will be utilized								
Option 2 LEAD	2,120'	65/35 Poz + 6% Gel + 10 pps gilsonite	200	35%	11.00		3.82		
		+ 0.25 pps Flocele + 3% salt BWOW							
TAIL	500'	Premium cmt + 2% CaCl	150	35%	15.80		1.15		
		+ 0.25 pps flocele							
TOP OUT CMT	as required	Premium cmt + 2% CaCl	as req.		15.80		1.15		
PRODUCTION LEAD	4,117'	Premium Lite II +0.25 pps	320	35%	12.00		3.38		
		celloflake + 5 pps gilsonite + 10% gel							
		+ 0.5% extender							
TAIL	5,340'	50/50 Poz/G + 10% salt + 2% gel	1,260	35%	14.30		1.31		
		+ 0.1% R-3							

<sup>\*</sup>Substitute caliper hole volume plus 0% excess for LEAD if accurate caliper is obtained

## **FLOAT EQUIPMENT & CENTRALIZERS**

SURFACE	Guide shoe, 1 jt, insert float. Centralize first 3 joints with bow spring centralizers. Thread lock guide shoe
PRODUCTION	Float shoe, 1 jt, float collar. 15 centralizers for a Mesaverde and 20 for a Blackhawk well.

#### ADDITIONAL INFORMATION

Test casing head to 750 psi after installing. Test surface casing to 1,500 psi prior to drilling out.

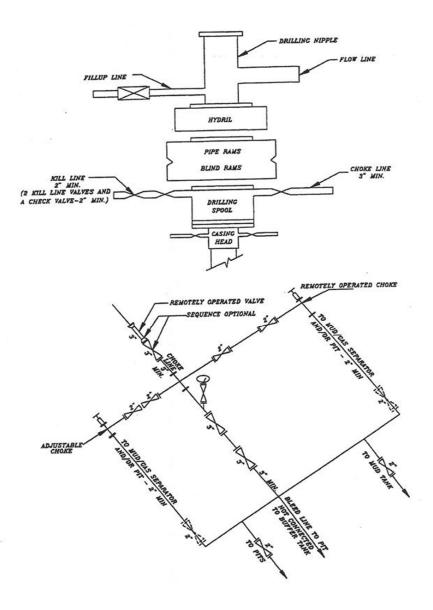
BOPE: 11" 5M with one annular and 2 rams. The BOPE will be installed before the production hole is drilled and tested to 5,000 psi (annular to 2,500 psi) prior to drilling out the surface casing shoe. Record on chart recorder and tour sheet. Function test rams on each trip. Maintain safety valve and inside BOP on rig floor at all times. Most rigs have top drives; however, if used, the Kelly is to be equipped with upper and lower kelly valves.

Surveys will be taken at 1,000' minimum interval	s.
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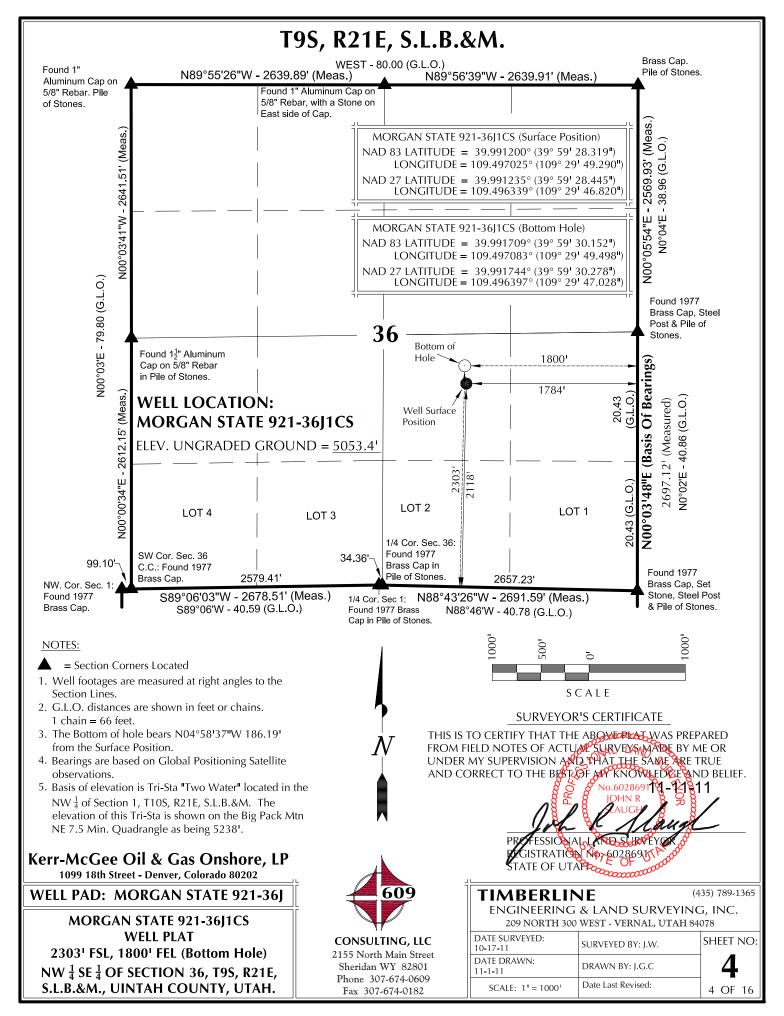
Most rigs have PVT System	for mud monitoring. If no PVT is available, visual monitoring will be utilized.		
DRILLING ENGINEER:		DATE:	
	Nick Spence / Danny Showers / Chad Loesel	-	
DRILLING SUPERINTENDENT:		DATE:	
	Kenny Gathings / Lovel Young		

<sup>\*</sup>Substitute caliper hole volume plus 10% excess for TAIL if accurate caliper is obtained

EXHIBIT A
MORGAN STATE 921-36J1CS



SCHEMATIC DIAGRAM OF 5,000 PSI BOP STACK



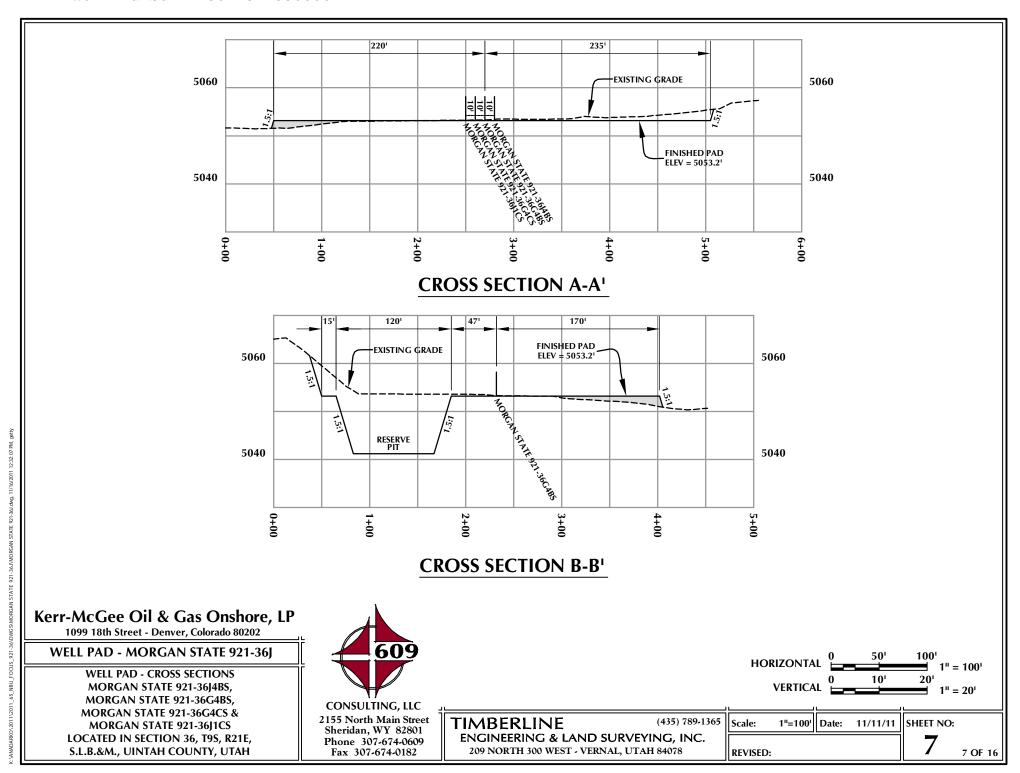
		SU	RFACE POSITIO	N				E	OTTOM HOLE		
WELL NAME	NAI	D83	NAE	D27			NAD	83	NAI		
MORGAN STATE	20°50'28 106"	LONGITUDE	LATITUDE	LONGITUDE	FOOTAGES	20°50123		LONGITUDE	20°50'23 463"	LONGITUDE	
921-36J4BS	39°59'28.106" 39.991141°	109°29'49.022" 109.496951°	39°59'28.232" 39.991175°	109°29'46.552"  109.496264°	2097' FSL 1763' FEL	39°59'23 39.98981		109°29'49.723" 109.497145°	39°59'23.463" 39.989851°	109°29'47.253' 109.496459°	1613' FSL 1817' FEL
MORGAN STATE	39°59'28.177"	109°29'49.111"	39°59'28.303"		2104¹ FSL	39°59'36	.783"	109°29'49.528"	39°59'36.909"	109°29'47.058'	2254' FNL
921-36G4BS	39.991160°	109.496975°	39.991195°	109.496289°	1770' FEL	39.99355		109.497091°	39.993586°	109.496405°	1803' FEL
MORGAN STATE 921-36G4CS	39°59'28.24/" 39.991180°	109°29'49.201"  109.497000°	39°59'28.373" 39.991215°	109°29'46.731"  109.496314°	2111' FSL 1777' FEL	39°59'33 39.99259		109°29'49.508" 109.497086°	39°59'33.471" 39.992631°	109°29'47.038' 109.496399°	' 2626' FSL 1801' FEL
MORGAN STATE		109°29'49.290"				39°59'30		109°29'49.498"	39°59'30.278"		
921-36J1CS	39.991200°	109.497025°	39.991235°	109.496339°	1784' FEL	39.99170	)9°	109.497083°	39.991744°	109.496397°	1800' FEL
MORGAN STATE 5-36	39°59'28.147"   39.991152°	109°29'49.521"  109.497089°	39°59'28.273"   39.991187°	109°29'47.050" 109.496403°	2100' FSL 1802' FEL						
	33.331132	109.497009		COORDINATES		Position to	o Botto	m Hole			
WELL NAME	NORTH	EAST WE		ORTH EAS		NAME	NORT		WELL NAM	AE NORTH	EAST
MORGAN STATE	-482.7'		RGAN STATE	71.1' -32.		AN STATE	515.9		MORGAN ST.		-16.2
921-36J4BS		921-	36G4BS O		921-360	34C5			921-36J1CS		
<		T <sub>x</sub>	13/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/3/	AZ=355.02306° N04°58'37"W - 186.19' — —	N02°06'42"W - 871.69' Z (To Bottom Hole)	38'02"V 38'02"V 38'02"V	V - 5	BASIS OF THE SE 1/4 S.L.B.&M GLOBAL	OF SECTION 1. WHICH IS T POSITIONING		
E	existing v	VELL: MOR		€ 5-36 ⊚ 70	MORGA MORGA	IN STAT GAN STA RGAN S	ATE 9: TATE	21-36G4CS 921-36G4B	Az. to Exist. W S Az. to Exist.	.=225.84306° ; v.H.=247.7547 w.H.=264.56 t. w.H.=276.10	'2° 26.9' 028° 32.0'
Kerr-McC 1099 18 WELL PA	Gee Oil & 8th Street - De	Gas Ons	hore, LP 80202 921-36J	€ 5-36 ⊚ 70	MORGA MORGA	IN STAT GAN STA RGAN S ORGAN	TI	21-36G4CS 921-36G4B TE 921-36J4	Az. to Exist. W S Az. to Exist. BS Az. to Exist. BS Az. to Exist. S C A L E	V.H.=247.7547 W.H.=264.56 t. W.H.=276.10	2° 26.9' 028° 32.0' 0444° 39.0'
Kerr-McC 1099 18 WELL PA WEL	Gee Oil & 8th Street - De	Gas Ons nver, Colorado AN STATE S REFERENCE PI	hore, LP 80202 921-36J	€ 5-36 ⊚ 70	S06°28'23"W - 485.79' AZ=186.47306	IN STAT GAN STA RGAN S ORGAN	TI	21-36G4CS 921-36G4B TE 921-36J4 MBERL NGINEERIN	Az. to Exist. W S Az. to Exist. BS Az. to Exist. V S C A L E	V.H.=247.7547 W.H.=264.56 t. W.H.=276.10	2° 26.9' 028° 32.0' 0444° 39.0' 335) 789-1365 G, INC.
Kerr-Mc( 1099 13 WELL PA WEL WEL	Gee Oil & 8th Street - De ID - MORG	Gas Ons nver, Colorado AN STATE 9 RFERENCE PI STATE 921-3614	hore, LP 80202 921-36J LAT 1885,	E 5-36 <b>⊙</b> ′o.	S06°28'23"W - 485.79' AZ=186.47306	AN STAT	TI E	MBERL NGINEERIN 209 NORTH SURVEYED:	Az. to Exist. W S Az. to Exist. BS Az. to Exist  N S C A L E INE IG & LAND 300 WEST - VER	V.H.=247.7547 W.H.=264.56 t. W.H.=276.10 (4 SURVEYING RNAL, UTAH 84	2° 26.9' 028° 32.0' 0444° 39.0' 335) 789-1365 G, INC.
Kerr-Mc( 1099 13 WELL PA WEL WEL	Gee Oil & 8th Street - De 1D - MORG LL PAD INTE LS - MORGAN MORGAN STATI	Gas Ons nver, Colorado AN STATE 9 RFERENCE PI STATE 921-36G4BS, E 921-36G4CS 8	hore, LP 80202 921-36J	E 5-36	(To Bottom Hole)  So6°28'23"W - 485.79"  AZ=186.47306	AN STAT	TI E	21-36G4CS 921-36G4B 1E 921-36J4 TE 921-36J4 MBERL NGINEERIN 209 NORTH SURVEYED:	Az. to Exist. W S Az. to Exist.  BS Az. to Exist.  V S C A L E  S C A L E  SURVEYED E	V.H.=247.7547 W.H.=264.56 t. W.H.=276.10  SURVEYING RNAL, UTAH 84 BY: J.W.	2° 26.9' 028° 32.0' 0444° 39.0' 55, INC.
Kerr-Mc( 1099 13 WELL PA WEL WEL M	Gee Oil & 8th Street - De D - MORG LL PAD INTE LS - MORGAN MORGAN STATI MORGAN STATI MORGAN STATI	Gas Ons nver, Colorado AN STATE 9 RFERENCE PI STATE 921-36G4BS, E 921-36G4CS 8	hore, LP 80202 921-36J LAT 1885,	E 5-36	(To Bottom Hole) So6°28'23"W - 485.79"  AZ=186.47306	AN STAT GAN STA RGAN S ORGAN	TI E	21-36G4CS 921-36G4B 1E 921-36J4 TE 921-36J4 MBERL NGINEERIN 209 NORTH SURVEYED: -11 DRAWN:	Az. to Exist. W S Az. to Exist. BS Az. to Exist  N S C A L E INE IG & LAND 300 WEST - VER	V.H.=247.7547 W.H.=264.56 t. W.H.=276.10  SURVEYING RNAL, UTAH 84 BY: J.W.	2° 26.9' 028° 32.0' 0444° 39.0' 0444° 39.0' 05.0' 07.0

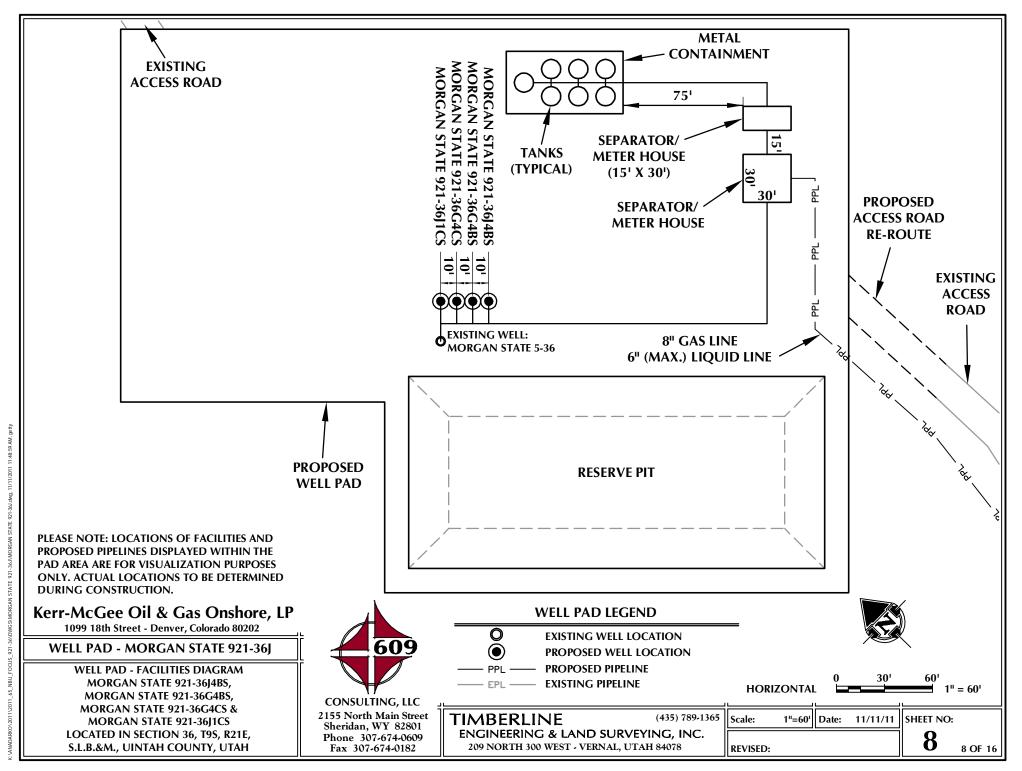
S.L.B.&M., UINTAH COUNTY, UTAH

209 NORTH 300 WEST - VERNAL, UTAH 84078

6 OF 16

**REVISED:** 





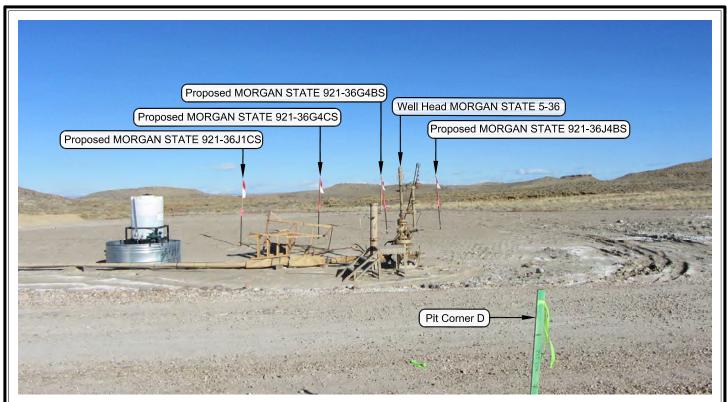


PHOTO VIEW: FROM PIT CORNER D TO LOCATION STAKE





PHOTO VIEW: FROM EXISTING ACCESS ROAD

**CAMERA ANGLE: SOUTHERLY** 

## Kerr-McGee Oil & Gas Onshore, LP

1099 18th Street - Denver, Colorado 80202

## WELL PAD - MORGAN STATE 921-36J

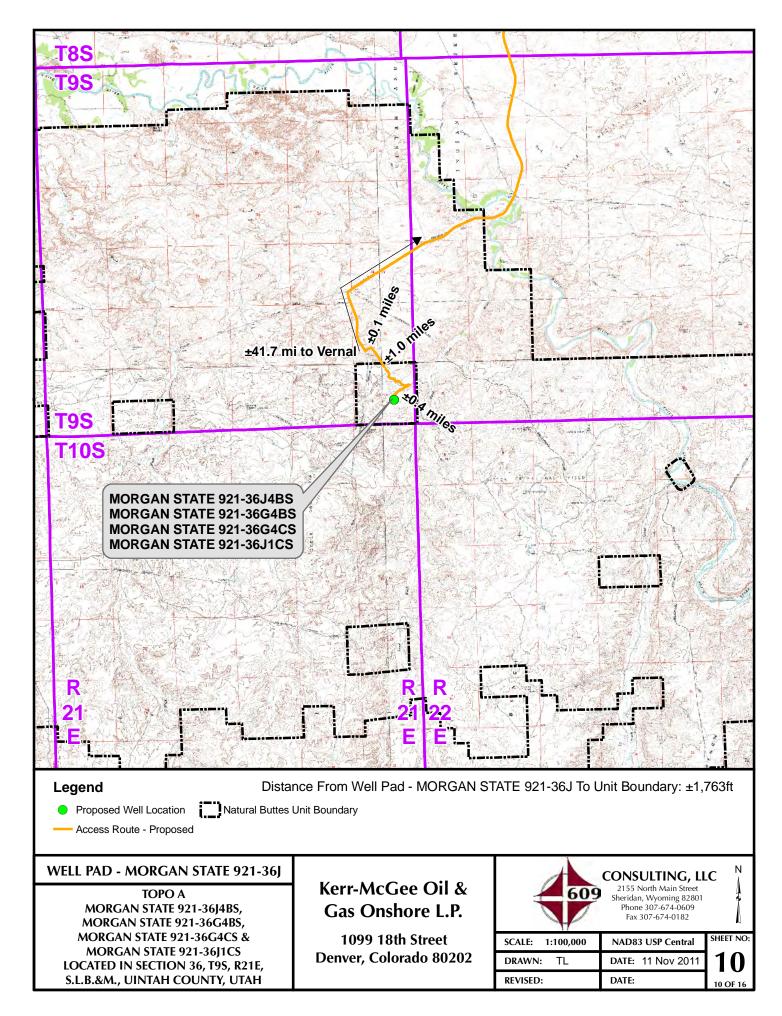
**LOCATION PHOTOS** MORGAN STATE 921-36J4BS, MORGAN STATE 921-36G4BS, MORGAN STATE 921-36G4CS & **MORGAN STATE 921-36J1CS** LOCATED IN SECTION 36, T9S, R21E, S.L.B.&M., UINTAH COUNTY, UTAH.

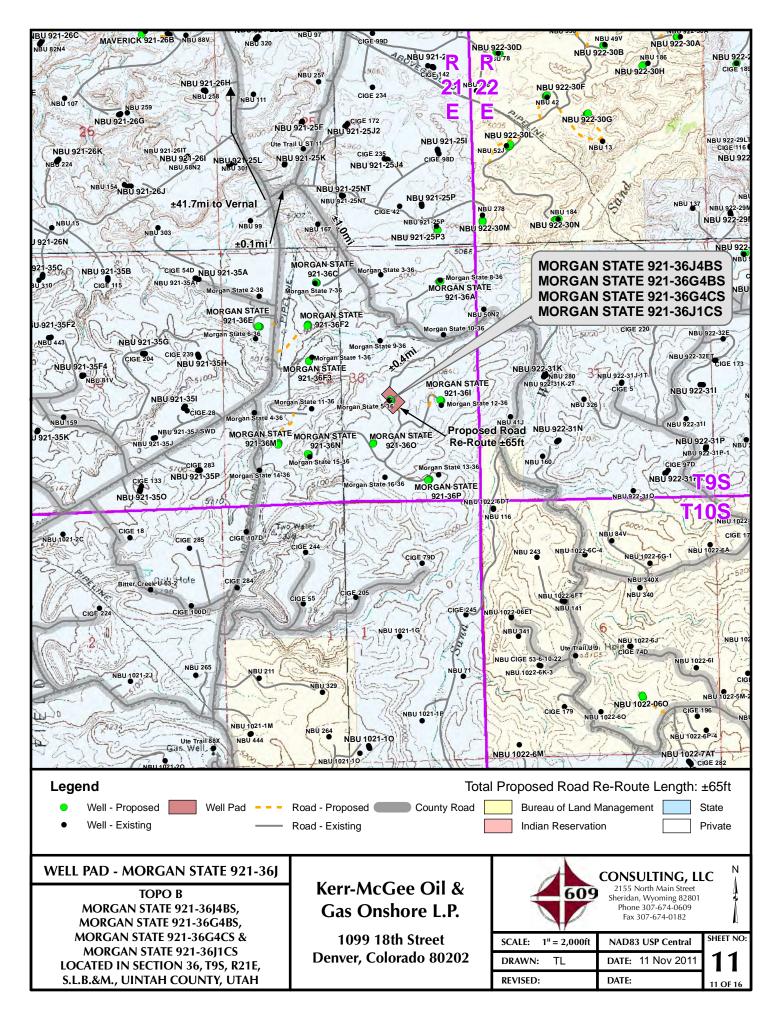


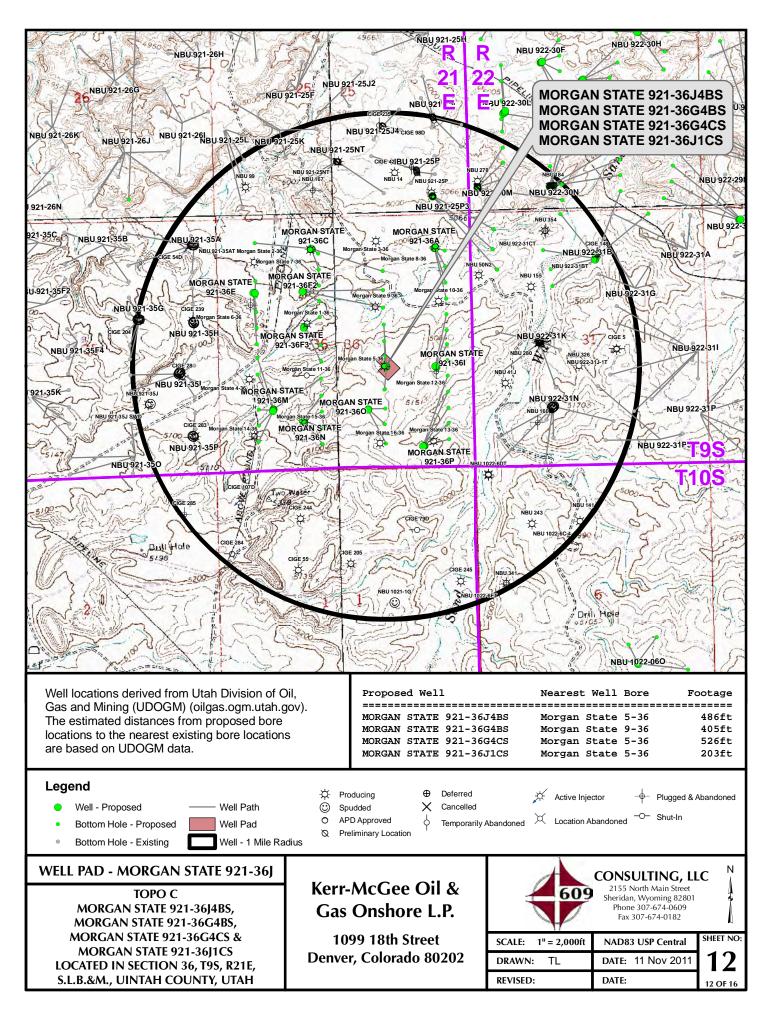
## CONSULTING, LLC Sheridan WY 82801

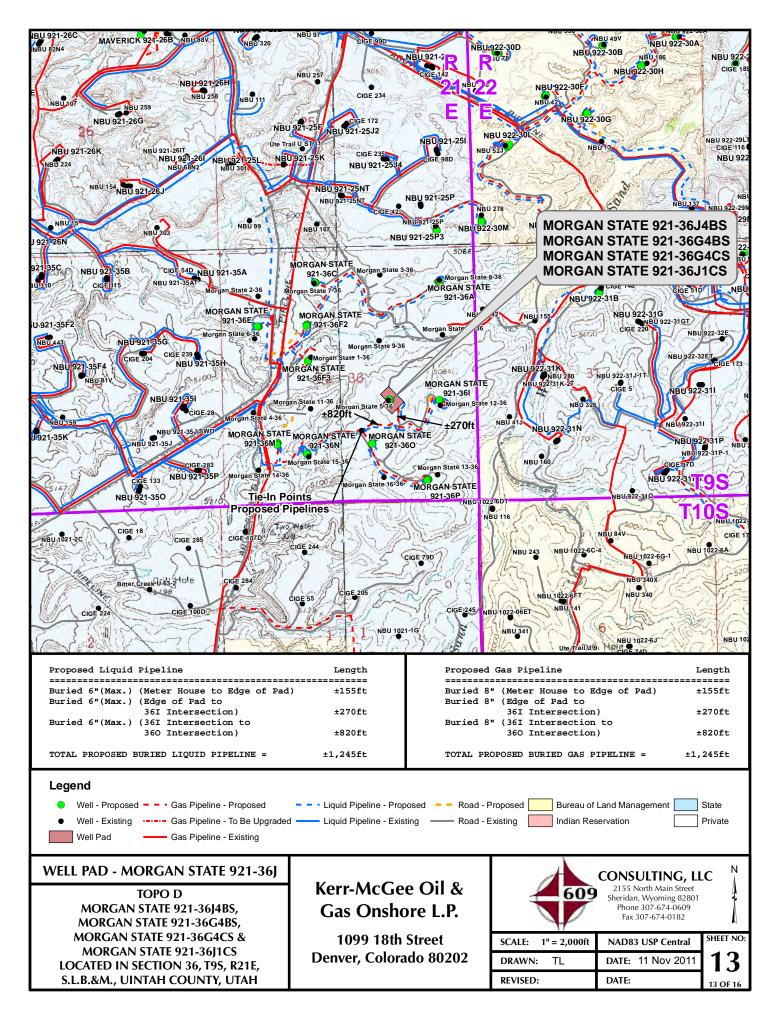
2155 North Main Street Phone 307-674-0609 Fax 307-674-0182

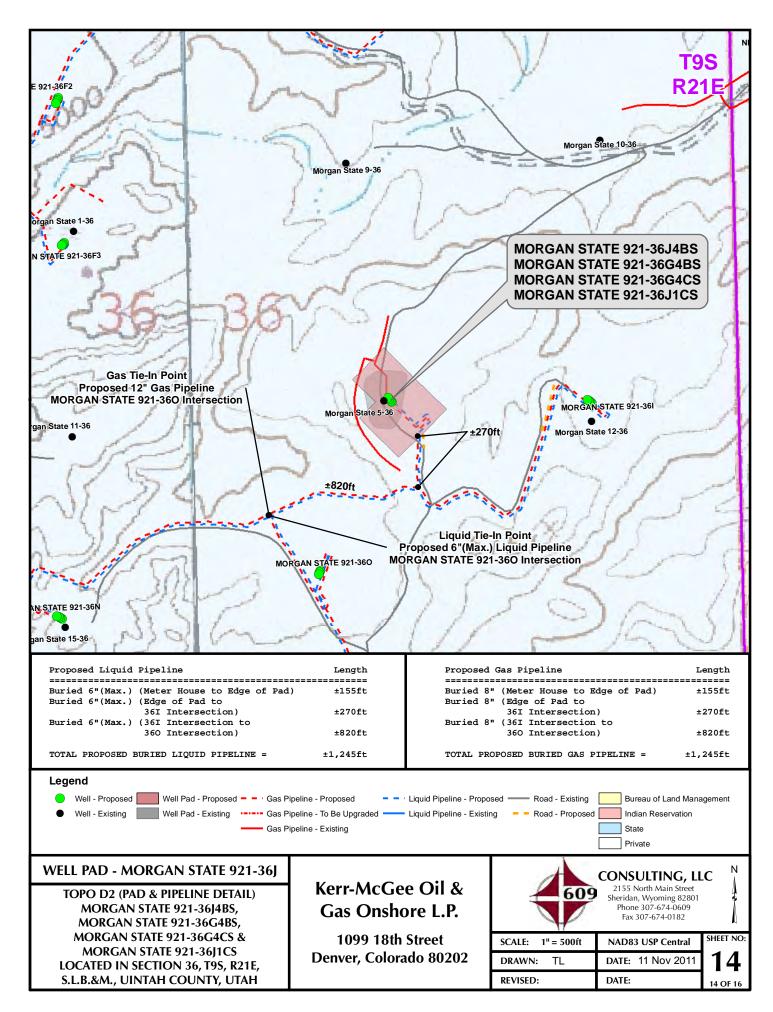
TIMBERLIN	JE (4	135) 789-1365
	& LAND SURVEYING WEST - VERNAL, UTAH 84	,
DATE PHOTOS TAKEN: 10-17-11	PHOTOS TAKEN BY: J.W.	SHEET NO:
DATE DRAWN: 11-1-11	DRAWN BY: J.G.C	9
Date Last Revised:		9 OF 16

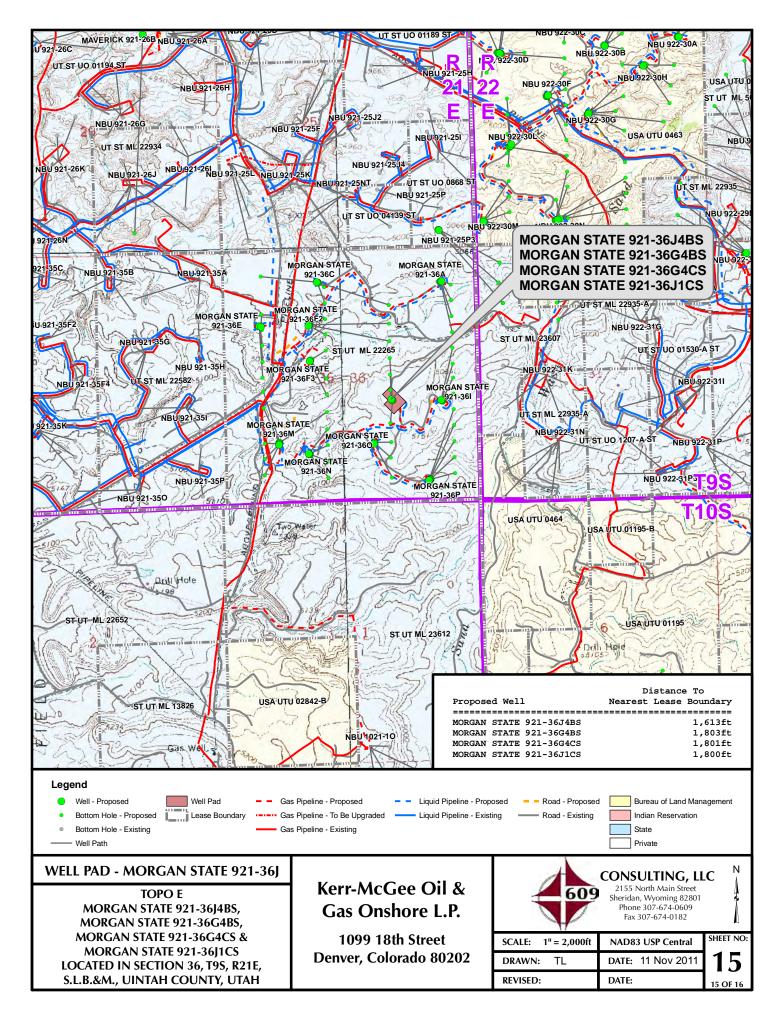












## Kerr-McGee Oil & Gas Onshore, LP WELL PAD – MORGAN STATE 921-36J WELLS – MORGAN STATE 921-36J4BS, MORGAN STATE 921-36G4BS, MORGAN STATE 921-36G4CS & MORGAN STATE 921-36J1CS Section 36, T9S, R21E, S.L.B.&M.

From the intersection of U.S. Highway 40 and 500 East Street in Vernal, Utah, proceed in an easterly, then southerly direction along U.S. Highway 40 approximately 3.3 miles to the junction of State Highway 45. Exit right and proceed in a southerly direction along State Highway 45 approximately 20.2 miles to the junction of the Glen Bench Road (County B Road 3260). Exit right and proceed in a southwesterly direction along the Glen Bench Road approximately 18.2 miles to a Class D County Road to the northeast. Exit left and proceed in a northeasterly direction along the Class D County Road approximately 0.1 miles to a second Class D County Road to the southeast. Exit right and proceed in a southeasterly direction along the second Class D County Road approximately 1.0 miles to a service road to the southwest. Exit right and proceed in a southwesterly direction approximately 0.4 miles to the proposed well location.

Total distance from Vernal, Utah to the proposed well location is approximately 43.2 miles in a southerly direction.

**SHEET 16 OF 16** 

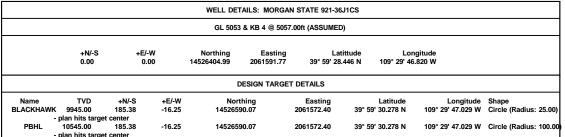
API Well Number: 43047 5 20 20 5 00 TAB - UTM (feet), NAD27, Zone 12N

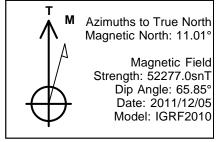
Site: MORGAN STATE 921-36J PAD Well: MORGAN STATE 921-36J1CS

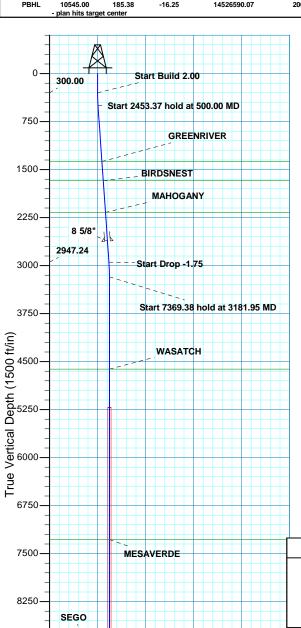
Wellbore: OH

Design: PLAN #1 PRELIMINARY









BLACKHAWK

TD at 10551.32

Vertical Section at 354.99° (1500 ft/in)

1500

2250

3000

750

9000 CASTLEGATE

10545.00

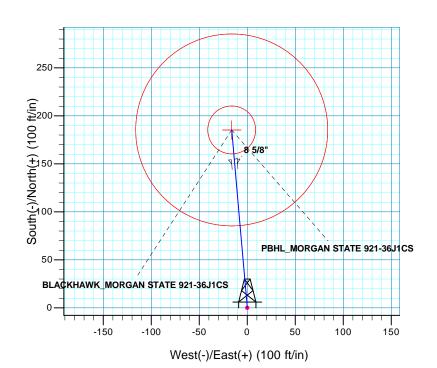
9750

10500

11250

Scientific Drilling

Rocky Mountain Operations



				SECT	ION DETAI	LS					
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target		
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	· u. go.		
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00			
500.00	4.00	354.99	499.84	6.95	-0.61	2.00	354.99	6.98			
2953.37	4.00	354.99	2947.24	177.44	-15.55	0.00	0.00	178.12			
3181.95	0.00	0.00	3175.62	185.38	-16.25	1.75	180.00	186.09			
10551.32	0.00	0.001	10545.00	185.38	-16.25	0.00	0.00	186.09	PBHL_MORG	SAN STATE 921-36J1CS	
								FORM	MATION TOP D	ETAILS	
PROJECT DETAILS: U	JTAH -	UTM (fee	et), NAD27	, Zone 12N	l		TVDPath	n	MDPath	Formation	

PROJECT DETAILS: UTAH - UTM (feet), NAD27, Zone 12N	TVDPath	MDPath	Formation	
eodetic System: Universal Transverse Mercator (US Survey Feet) Datum: NAD 1927 (NADCON CONUS) Ellipsoid: Clarke 1866 Zone: Zone 12N (114 W to 108 W) Location: SECTION 36 T9S R21E System Datum: Mean Sea Level	1375.00 1673.00 2169.00 4617.00 7280.00 9451.00 9916.00	1377.30 1676.03 2173.24 4623.32 7286.32 9457.32 9522.32 9951.32	GREENRIVER BIRDSNEST MAHOGANY WASATCH MESAVERDE SEGO CASTLEGATE BLACKHAWK	
CACING DETAILS				

CASING DETAILS

TVD MD Name Size 2619.00 2624.34 8 5/8" 8.625

Plan: PLAN #1 PRELIMINARY (MORGAN STATE 921-36J1CS/OH)

RECEIVED: Created By: RobertScott Date: 8:16, December 05 2011

API Well Number: 43047522550000



## **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N MORGAN STATE 921-36J PAD MORGAN STATE 921-36J1CS

OH

Plan: PLAN #1 PRELIMINARY

## **Standard Planning Report**

05 December, 2011



API Well Number: 43047522550000



## **SDI**Planning Report



Database: EDM5000-RobertS-Local Company: US ROCKIES REGION P

US ROCKIES REGION PLANNING
UTAH - UTM (feet), NAD27, Zone 12N
MORGAN STATE 921-36J PAD

Site:MORGAN STATE 921-36J PADWell:MORGAN STATE 921-36J1CS

Wellbore: OH

Project:

Geo Datum:

Map Zone:

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well MORGAN STATE 921-36J1CS

GL 5053 & KB 4 @ 5057.00ft (ASSUMED) GL 5053 & KB 4 @ 5057.00ft (ASSUMED)

True

Minimum Curvature

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS) Zone 12N (114 W to 108 W) System Datum: Mean Sea Level

Site MORGAN STATE 921-36J PAD, SECTION 36 T9S R21E

Northing: 14,526,390.66 usft Site Position: Latitude: 39° 59' 28.302 N From: Lat/Long Easting: 2,061,606.02 usft Longitude: 109° 29' 46.640 W **Position Uncertainty:** 0.00 ft Slot Radius: **Grid Convergence:** 0.97 13.200 in

,

Well MORGAN STATE 921-36J1CS, 2118 FSL 1784 FEL

 Well Position
 +N/-S
 14.57 ft
 Northing:
 14,526,404.99 usft
 Latitude:
 39° 59' 28.446 N

 +E/-W
 -14.01 ft
 Easting:
 2,061,591.77 usft
 Longitude:
 109° 29' 46.820 W

Position Uncertainty 0.00 ft Wellhead Elevation: Ground Level: 5,053.00 ft

Wellbore ОН Magnetics **Model Name** Sample Date Declination Dip Angle Field Strength (nT) (°) (°) IGRF2010 2011/12/05 11.01 65.85 52.277

PLAN #1 PRELIMINARY Design Audit Notes: Version: Phase: PLAN Tie On Depth: 0.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 0.00 0.00 0.00 354.99

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	4.00	354.99	499.84	6.95	-0.61	2.00	2.00	0.00	354.99	
2,953.37	4.00	354.99	2,947.24	177.44	-15.55	0.00	0.00	0.00	0.00	
3,181.95	0.00	0.00	3,175.62	185.38	-16.25	1.75	-1.75	0.00	180.00	
10,551.32	0.00	0.00	10,545.00	185.38	-16.25	0.00	0.00	0.00	0.00 PE	BHL_MORGAN STA



# **SDI**Planning Report



Database: EDM5000-RobertS-Local
Company: US ROCKIES REGION PI
Project: UTAH - UTM (feet), NAD2

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N MORGAN STATE 921-36J PAD

Well: MORGAN STATE 921-36J1CS

Wellbore: OH

Site:

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well MORGAN STATE 921-36J1CS GL 5053 & KB 4 @ 5057.00ft (ASSUMED) GL 5053 & KB 4 @ 5057.00ft (ASSUMED)

True

Minimum Curvature

sign:	PLAN #1 PRE	LIMINARI							
nned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00 100.00 200.00 300.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 100.00 200.00 300.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Start Build 2	2.00								
400.00 500.00	2.00 4.00	354.99 354.99	399.98 499.84	1.74 6.95	-0.15 -0.61	1.75 6.98	2.00 2.00	2.00 2.00	0.00 0.00
	7 hold at 500.00		433.04	0.93	-0.01	0.90	2.00	2.00	0.00
600.00 700.00 800.00	4.00 4.00 4.00 4.00	354.99 354.99 354.99	599.59 699.35 799.11	13.90 20.85 27.80	-1.22 -1.83 -2.44	13.95 20.93 27.91	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
900.00	4.00	354.99	898.86	34.75	-3.05	34.88	0.00	0.00	0.00
1,000.00 1,100.00 1,200.00 1,300.00	4.00 4.00 4.00 4.00 4.00	354.99 354.99 354.99 354.99	998.62 1,098.38 1,198.13 1,297.89	41.70 48.65 55.59 62.54	-3.65 -4.26 -4.87 -5.48	41.86 48.83 55.81 62.78	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
1,377.30 <b>GREENRIVE</b>		354.99	1,375.00	67.92	-5.95	68.18	0.00	0.00	0.00
1,400.00 1,500.00 1,600.00	4.00 4.00 4.00	354.99 354.99 354.99	1,397.65 1,497.40 1,597.16	69.49 76.44 83.39	-6.09 -6.70 -7.31	69.76 76.73 83.71	0.00 0.00 0.00	0.00 0.00 0.00	0.00 0.00 0.00
1,676.03 BIRDSNEST	4.00	354.99	1,673.00	88.67	-7.77	89.01	0.00	0.00	0.00
1,700.00	4.00	354.99	1,696.91	90.34	-7.92	90.69	0.00	0.00	0.00
1,800.00 1,900.00 2,000.00 2,100.00 2,173.24	4.00 4.00 4.00 4.00 4.00	354.99 354.99 354.99 354.99 354.99	1,796.67 1,896.43 1,996.18 2,095.94 2,169.00	97.29 104.24 111.19 118.14 123.23	-8.53 -9.14 -9.75 -10.35 -10.80	97.66 104.64 111.61 118.59 123.70	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
MAHOGANY	•								
2,200.00 2,300.00 2,400.00 2,500.00 2,600.00	4.00 4.00 4.00 4.00 4.00	354.99 354.99 354.99 354.99 354.99	2,195.70 2,295.45 2,395.21 2,494.97 2,594.72	125.08 132.03 138.98 145.93 152.88	-10.96 -11.57 -12.18 -12.79 -13.40	125.56 132.54 139.52 146.49 153.47	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00
2,624.34	4.00	354.99	2,619.00	154.57	-13.55	155.16	0.00	0.00	0.00
8 5/8" 2,700.00 2,800.00 2,900.00 2,953.37	4.00 4.00 4.00 4.00	354.99 354.99 354.99 354.99	2,694.48 2,794.23 2,893.99 2,947.24	159.83 166.78 173.73 177.44	-14.01 -14.62 -15.23 -15.55	160.44 167.42 174.39 178.12	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00
Start Drop -1			,		,				
3,000.00 3,100.00 3,181.95	3.18 1.43 0.00	354.99 354.99 0.00	2,993.77 3,093.68 3,175.62	180.35 184.36 185.38	-15.81 -16.16 -16.25	181.04 185.07 186.09	1.75 1.75 1.75	-1.75 -1.75 -1.75	0.00 0.00 0.00
	8 hold at 3181.9								
3,200.00 3,300.00	0.00 0.00	0.00 0.00	3,193.68 3,293.68	185.38 185.38	-16.25 -16.25	186.09 186.09	0.00 0.00	0.00 0.00	0.00 0.00
3,400.00 3,500.00 3,600.00 3,700.00 3,800.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	3,393.68 3,493.68 3,593.68 3,693.68 3,793.68	185.38 185.38 185.38 185.38 185.38	-16.25 -16.25 -16.25 -16.25 -16.25	186.09 186.09 186.09 186.09 186.09	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00	0.00 0.00 0.00 0.00 0.00



## **SDI**Planning Report



Database: EDM5000-RobertS-Local
Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 1:

UTAH - UTM (feet), NAD27, Zone 12N MORGAN STATE 921-36J PAD MORGAN STATE 921-36J1CS

Wellbore: OH

Site:

Well:

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well MORGAN STATE 921-36J1CS GL 5053 & KB 4 @ 5057.00ft (ASSUMED) GL 5053 & KB 4 @ 5057.00ft (ASSUMED)

True

Minimum Curvature

Design:	PLAN #1 PRE	LIMINARY							
Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,900.00	0.00	0.00	3,893.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,000.00	0.00	0.00	3,993.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,100.00	0.00	0.00	4,093.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,200.00	0.00	0.00	4,193.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,300.00	0.00	0.00	4,293.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,400.00	0.00	0.00	4,393.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,500.00	0.00	0.00	4,493.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,600.00	0.00	0.00	4,593.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,623.32	0.00	0.00	4,617.00	185.38	-16.25	186.09	0.00	0.00	0.00
WASATCH									
4,700.00	0.00	0.00	4,693.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,800.00	0.00	0.00	4,793.68	185.38	-16.25	186.09	0.00	0.00	0.00
4,900.00	0.00	0.00	4,893.68	185.38	-16.25	186.09	0.00	0.00	0.00
5,000.00	0.00	0.00	4,993.68	185.38	-16.25	186.09	0.00	0.00	0.00
5,100.00	0.00	0.00	5,093.68	185.38	-16.25	186.09	0.00	0.00	0.00
5,200.00	0.00	0.00	5,193.68	185.38	-16.25	186.09	0.00	0.00	0.00
5,300.00	0.00	0.00	5.293.68	185.38	-16.25	186.09	0.00	0.00	0.00
5,400.00	0.00	0.00	5,393.68	185.38	-16.25	186.09	0.00	0.00	0.00
5,500.00	0.00	0.00	5,493.68	185.38	-16.25	186.09	0.00	0.00	0.00
	0.00	0.00	5,493.68		-16.25 -16.25	186.09	0.00	0.00	0.00
5,600.00 5,700.00	0.00	0.00	5,693.68	185.38 185.38	-16.25 -16.25	186.09	0.00	0.00	0.00
5,700.00	0.00	0.00	5,095.06	100.30	-10.25		0.00	0.00	0.00
5,800.00	0.00	0.00	5,793.68	185.38	-16.25	186.09	0.00	0.00	0.00
5,900.00	0.00	0.00	5,893.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,000.00	0.00	0.00	5,993.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,100.00	0.00	0.00	6,093.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,200.00	0.00	0.00	6,193.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,300.00	0.00	0.00	6,293.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,400.00	0.00	0.00	6,393.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,500.00	0.00	0.00	6,493.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,600.00	0.00	0.00	6,593.68	185.38	-16.25	186.09	0.00	0.00	0.00
6,700.00	0.00	0.00	6,693.68	185.38	-16.25	186.09	0.00	0.00	0.00
0.000.00	0.00	0.00	0.700.00	405.00	40.05	400.00	0.00	0.00	0.00
6,800.00 6,900.00	0.00 0.00	0.00 0.00	6,793.68 6,893.68	185.38 185.38	-16.25 -16.25	186.09 186.09	0.00 0.00	0.00 0.00	0.00 0.00
7,000.00	0.00	0.00	6,993.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,100.00	0.00	0.00	7,093.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,100.00	0.00	0.00	7,193.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,286.32	0.00	0.00	7,280.00	185.38	-16.25	186.09	0.00	0.00	0.00
MESAVERDE									
7,300.00	0.00	0.00	7,293.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,400.00	0.00	0.00	7,393.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,500.00	0.00	0.00	7,493.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,600.00	0.00	0.00	7,593.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,700.00	0.00	0.00	7,693.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,800.00	0.00	0.00	7,793.68	185.38	-16.25	186.09	0.00	0.00	0.00
7,900.00	0.00	0.00	7,893.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,000.00	0.00	0.00	7,993.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,100.00	0.00	0.00	8,093.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,200.00	0.00	0.00	8,193.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,300.00	0.00	0.00	8,293.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,400.00	0.00	0.00	8,393.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,500.00	0.00	0.00	8,493.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,600.00	0.00	0.00	8,593.68	185.38	-16.25	186.09	0.00	0.00	0.00
8,700.00 8,800.00	0.00 0.00	0.00 0.00	8,693.68 8,793.68	185.38 185.38	-16.25 -16.25	186.09 186.09	0.00 0.00	0.00 0.00	0.00 0.00
0,000.00	0.00	0.00	0,193.00	100.30	-10.23	100.09	0.00	0.00	0.00



# **SDI**Planning Report



Database: Company: Project:

Site:

Well:

EDM5000-RobertS-Local

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N MORGAN STATE 921-36J PAD

MORGAN STATE 921-36J1CS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well MORGAN STATE 921-36J1CS

GL 5053 & KB 4 @ 5057.00ft (ASSUMED) GL 5053 & KB 4 @ 5057.00ft (ASSUMED)

True

Minimum Curvature

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8.900.00	0.00	0.00	8.893.68	185.38	-16.25	186.09	0.00	0.00	0.00
9,000.00	0.00	0.00	8,993.68	185.38	-16.25	186.09	0.00	0.00	0.00
9,100.00	0.00	0.00	9,093.68	185.38	-16.25	186.09	0.00	0.00	0.00
•			•						
9,200.00 9.300.00	0.00	0.00	9,193.68 9.293.68	185.38	-16.25	186.09 186.09	0.00	0.00	0.00
-,	0.00	0.00	9,293.68	185.38	-16.25 -16.25		0.00	0.00	0.00
9,400.00 9,457.32	0.00 0.00	0.00 0.00	9,393.00	185.38 185.38	-16.25 -16.25	186.09 186.09	0.00 0.00	0.00 0.00	0.00 0.00
9,457.32 SEGO	0.00	0.00	9,451.00	100.00	-10.25	160.09	0.00	0.00	0.00
9,500.00	0.00	0.00	9,493.68	185.38	-16.25	186.09	0.00	0.00	0.00
,									
9,522.32	0.00	0.00	9,516.00	185.38	-16.25	186.09	0.00	0.00	0.00
CASTLEGAT									
9,600.00	0.00	0.00	9,593.68	185.38	-16.25	186.09	0.00	0.00	0.00
9,700.00	0.00	0.00	9,693.68	185.38	-16.25	186.09	0.00	0.00	0.00
9,800.00	0.00	0.00	9,793.68	185.38	-16.25	186.09	0.00	0.00	0.00
9,900.00	0.00	0.00	9,893.68	185.38	-16.25	186.09	0.00	0.00	0.00
9,951.32	0.00	0.00	9,945.00	185.38	-16.25	186.09	0.00	0.00	0.00
BLACKHAW	K - BLACKHAW	K_MORGAN ST	ATE 921-36J10	s					
10,000.00	0.00	0.00	9,993.68	185.38	-16.25	186.09	0.00	0.00	0.00
10,100.00	0.00	0.00	10,093.68	185.38	-16.25	186.09	0.00	0.00	0.00
10,200.00	0.00	0.00	10,193.68	185.38	-16.25	186.09	0.00	0.00	0.00
10,300.00	0.00	0.00	10,293.68	185.38	-16.25	186.09	0.00	0.00	0.00
10,400.00	0.00	0.00	10,393.68	185.38	-16.25	186.09	0.00	0.00	0.00
10,500.00	0.00	0.00	10,493.68	185.38	-16.25	186.09	0.00	0.00	0.00
10,551.32	0.00	0.00	10,545.00	185.38	-16.25	186.09	0.00	0.00	0.00

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
BLACKHAWK_MORGAI - plan hits target cen - Circle (radius 25.00		0.00	9,945.00	185.38	-16.25	14,526,590.07	2,061,572.39	39° 59' 30.278 N	109° 29' 47.029 W
PBHL_MORGAN STATE - plan hits target cen - Circle (radius 100.0	ter	0.00	10,545.00	185.38	-16.25	14,526,590.07	2,061,572.39	39° 59' 30.278 N	109° 29' 47.029 W

Casing Points							
	Measured	Vertical			Casing	Hole	
	Depth	Depth			Diameter	Diameter	
	(ft)	(ft)		Name	(in)	(in)	
	2,624.34	2,619.00	8 5/8"		8.625	11.000	

API Well Number: 43047522550000



## **SDI** Planning Report



Database: Company: Project: Site: EDM5000-RobertS-Local

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N MORGAN STATE 921-36J PAD

Well: MORGAN STATE 921-36J1CS

Wellbore: OH

Design: PLAN #1 PRELIMINARY

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:

**Survey Calculation Method:** 

Well MORGAN STATE 921-36J1CS

GL 5053 & KB 4 @ 5057.00ft (ASSUMED) GL 5053 & KB 4 @ 5057.00ft (ASSUMED)

True

Minimum Curvature

mations								
	Measured Depth (ft)	Vertical Depth (ft)		Name	Lithology	Dip (°)	Dip Direction (°)	
	1,377.30	1,375.00	GREENRIVER					
	1,676.03	1,673.00	BIRDSNEST					
	2,173.24	2,169.00	MAHOGANY					
	4,623.32	4,617.00	WASATCH					
	7,286.32	7,280.00	MESAVERDE					
	9,457.32	9,451.00	SEGO					
	9,522.32	9,516.00	CASTLEGATE					
	9,951.32	9,945.00	BLACKHAWK					

Plan Annotations				
Measured	Vertical	Local Coordinates		
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
300.00	300.00	0.00	0.00	Start Build 2.00
500.00	499.84	6.95	-0.61	Start 2453.37 hold at 500.00 MD
2,953.37	2,947.24	177.44	-15.55	Start Drop -1.75
3,181.95	3,175.62	185.38	-16.25	Start 7369.38 hold at 3181.95 MD
10,551.32	10,545.00	185.38	-16.25	TD at 10551.32

RECEIVED: December 20, 2011

Surface Use Plan of Operations

Morgan State 921-36G4BS/ 921-36G4CS/ 921-36J1CS/ 921-36J4BS

1 of 9

### MORGAN STATE 921-36G4BS

 Surface:
 2104 FSL / 1770 FEL
 NWSE
 Lot

 BHL:
 2254 FNL / 1803 FEL
 SWNE
 Lot

## **MORGAN STATE 921-36G4CS**

 Surface:
 2111 FSL / 1777 FEL
 NWSE
 Lot

 BHL:
 2626 FSL / 1801 FEL
 NWSE
 Lot

## **MORGAN STATE 921-36J1CS**

Surface: 2118 FSL / 1784 FEL NWSE Lot BHL: 2303 FSL / 1800 FEL NWSE Lot

### **MORGAN STATE 921-36J4BS**

Surface: 2097 FSL / 1763 FEL NWSE Lot BHL: 1613 FSL / 1817 FEL NWSE Lot

## Pad: MORGAN STATE 921-36J PAD

Section 36 T9S R21E Mineral Lease: ML-22265

Uintah County, Utah

Operator: Kerr-McGee Oil & Gas Onshore LP

This SUPO contains surface operating procedures for Kerr-McGee Oil & Gas Onshore LP (KMG), a wholly owned subsidiary of Anadarko Petroleum Corporation (APC) pertaining to actions that involve the State of Utah School and Institutional Trust Lands Administration (SITLA) in the development of minerals leased to APC/KMG (including but not limited to, APDs/SULAs/ROEs/ROWs and/or easements.)

See associated Utah Division of Oil, Gas, and Mining (UDOGM) Form 3(s), plats, maps, and other attachments for site-specific information on projects represented herein.

In accordance with Utah Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling, these wells will be directionally drilled. Refer to Topo Map A for directions to the location and Topo Maps A and B for location of access roads within a 2-mile radius.

### A. **Existing Roads**:

Existing roads consist of county and improved/unimproved lease roads. KMG will maintain existing roads in a condition that is the same as or better than before operations began and in a safe and usable condition. Maintenance of existing roads will continue until final abandonment and reclamation of well pads and/or other facilities. The road maintenance may include, but is not limited to, blading, ditching, culvert installation/cleanout, surfacing, and dust control.

Typically, roads, gathering lines and electrical distribution lines will occupy common disturbance corridors and roadways will be used as working space. All disturbances located in the same corridor will overlap each other to the maximum extent possible; in no case will the maximum disturbance width of the access road and utility corridors exceed 50', unless otherwise approved.

### B. Planned Access Roads:

Approximately  $\pm 65$ ' (0.01 miles) of proposed road re-route is proposed (see Topo Map B). Applicable Uintah County encroachment and/or pipeline crossing permits will be obtained prior to construction/development. No other pipelines will be crossed at this location.

If there are roads that are new or to be reconstructed, they will be located, designed, and maintained to meet the standards of SITLA and other commonly accepted Best Management Practices (BMPs). If a new road/corridor were to cross a water of the United States, KMG will adhere to the requirements of applicable Nationwide or Individual Permits of the Department of Army Corps of Engineers.

During the onsite, turnouts, major cut and fills, culverts, bridges, gates, cattle guards, low water crossings, or modifications needed to existing infrastructure/facilities were determined, as applicable, are typically shown on attached Exhibits and Topo maps.

## C. Location of Existing and Proposed Facilities:

This pad will expand the existing pad for the Morgan State 5-36. The Morgan State 5-36 well location is a producing well according to Utah Division of Oil, Gas and Mining (UDOGM) records as of December 5, 2011.

Production facilities (see Well Pad Design Summary and Facilities Diagram):

Production facilities will be installed on the disturbed portion of the well pad and may include bermed components (typically excluding dehy's and/or separators) that contain fluids (i.e. production tanks, produced liquids tanks). The berms will be constructed of compacted subsoil or corrugated metal, impervious, designed to hold 110% of the capacity of the largest tank, and be independent of the back cut. All permanent (on-site six months or longer) above ground structures constructed or installed, including pumping units, will be painted a flat, non-reflective, earth-tone color chosen at the onsite in coordination with SITLA.

### **Gathering Facilities:**

The following pipeline transmission facilities will apply if the well is productive (see Topo D):

The total gas gathering (steel line pipe with fusion bond epoxy coating) pipeline distances from the meter to the tie in point is  $\pm 1,245$ ' and the individual segments are broken up as follows:

- $\pm 155'$  (0.03 miles) –New 8" buried gas pipeline from the meter to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- $\pm 270'$  (0.05 miles) –New 8" buried gas pipeline from the edge of pad to the 921-36I intersection. Please refer to Topo D2 Pad and Pipeline Detail.
- $\pm 820'$  (0.2 miles) –New 8" buried gas pipeline from the 921-36I intersection to the 921-36O intersection. Please refer to Topo D2 Pad and Pipeline Detail.

The total liquid gathering pipeline distance from the separator to the tie in point is  $\pm 1,245$ ' and the individual segments are broken up as follows:

- ±155' (0.03 miles) –New 6" buried liquid pipeline from the separator to the edge of the pad. Please refer to Topo D2 Pad and Pipeline Detail.
- ±270' (0.05 miles) –New 6" buried liquid pipeline from the edge of pad to the 921-36I intersection. Please refer to Topo D2 Pad and Pipeline Detail.
- $\pm 820'$  (0.2 miles) –New 6" buried liquid pipeline from the 921-36I intersection to the 921-36O intersection. Please refer to Topo D2 Pad and Pipeline Detail.

The liquid gathering lines will be made of polyethylene or a composite polyethylene/steel or polyethylene/fiberglass that is not subject to internal or external pipe corrosion. The content of the produced fluids to be transferred by the liquid gathering system will be approximately 92% produced water and 8% condensate. Trunk line valve connections for the water gathering system will be below ground but accessible from the surface in order to prevent freezing during winter time.

The proposed pipelines will be buried and will include gas gathering and liquid gathering pipelines in the same trench. Where the pipeline is adjacent to the road or well pad, the road and/or well pad will be utilized for construction activities and staging. KMG requests a permanent 30' right-of-way adjacent to the road for life-of-project for maintenance, repairs, and/or upgrades, no additional right-of-way will be needed beyond the 30'. Where the pipeline is not adjacent to the road or well pad, KMG requests a temporary 45' construction right-of-way 30' permanent right-of-way.

The proposed trench width for the pipeline would range from 18-48 inches and will be excavated to a depth of 48 to 60 inches of normal soil cover or 24 inches of cover in consolidated rock. During construction blasting may occur along the proposed right-of-way where trenching equipment cannot cut into the bedrock. Large debris and rocks removed from the earth during trenching and blasting that could not be returned to the trench would be distributed evenly and naturally in the project area. The proposed pipelines will be pressure tested pneumatically (depending on size) or with fluids (either fresh or produced). If fluids are used, there will be no discharge to the surface.

Pipeline signs will be installed along the right-of-way to indicate the pipeline proximity and ownership, as well as to provide emergency contact phone numbers. Above ground valves, T's, and/or cathodic protection will be installed at various locations for connection, corrosion prevention and/or for safety purposes.

## D. <u>Location and Type of Water Supply</u>:

Water for drilling purposes will be obtained from one of the following sources:

- Dalbo Inc.'s underground well located in Ouray, Utah, Sec. 32 T4S R3E, Water User Claim number 43-8496, application number 53617.
- Price Water Pumping Inc. Green River and White River, various sources, Water Right Number 49-1659, application number: a35745.

Water will be hauled to location over the roads marked on Maps A and B.

No water well is to be drilled on this lease.

#### E. Source of Construction Materials:

Construction operations will typically be completed with native materials found on location. If needed, construction materials that must be imported to the site (mineral material aggregate, soils or materials suitable for fill/surfacing) will be obtained from a nearby permitted source and described in subsequent Sundry requests. No construction materials will be removed from State lands without prior approval from SITLA.

## F. Methods for Handling Waste Materials:

Should the well be productive, produced water will be contained in a water tank and will be transported by pipeline and/or truck to an approved disposal sites facilities and/or Salt Water Disposal (SWD) injection well. Currently, those facilities are:

RNI in Sec. 5 T9S R22E Ace Oilfield in Sec. 2 T6S R20E MC&MC in Sec. 12 T6S R19E Pipeline Facility in Sec. 36 T9S R20E

Goat Pasture Evaporation Pond in SW/4 Sec. 16 T10S R22E

Bonanza Evaporation Pond in Sec. 2 T10S R23E

Ouray #1 SWD in Sec. 1 T9S R21E NBU 159 SWD in Sec. 35 T9S R21E CIGE 112D SWD in Sec. 19 T9S R21E CIGE 114 SWD in Sec. 34 T9S R21E NBU 921-34K SWD in Sec. 34 T9S R21E NBU 921-33F SWD in Sec. 33 T9S R21E NBU 921-34L SWD in Sec. 34 T9S R21E

Kerr-McGee will use either a closed loop drilling system that will require one pit and one cuttings storage area to be constructed on the drilling pad or a traditional drilling operation with one pit used for drilling and completion operations. The cuttings storage area will be used to contain only the de-watered drill cuttings and will be lined and bermed to prevent any liquid runoff. The drill cuttings will be buried in the completion pit once completion operations are completed according to traditional pit closure standards. The pit will be constructed to allow for completion operations. The completion operations pit will be lined with a synthetic material 20 mil or thicker and will be used for the completing of the wells on the pad or used as part of our Aandarko Completions Transportation System (ACTS). Using the closed loop drilling system will allow Kerr-McGee to decrease the amount of disturbance/footprint on location compared to a single large drilling/completions pit.

If Kerr-McGee does not use a closed loop drilling system, it will construct a traditional drilling/completions pit to contain drill cuttings and for use in completion operations. The pit will be lined with a synthetic material 20 mil or thicker. The drill cuttings will be buried in the pit using traditional pit closure standards.

Unless otherwise approved, no oil or other oil based drill additives, chromium/metals-based, or saline muds will be used during drilling. Only fresh water, biodegradable polymer soap, bentonite clay, and /or non-toxic additives will be used in the system.

Pits will be constructed to minimize the accumulation of surface runoff. Should fluid hydrocarbons be encountered during drilling, completions, or well testing, product will either be contained in test tanks on the well site or evacuated by vacuum

trucks and transported to an approved disposal/sales facility. Should petroleum hydrocarbons unexpectedly be release into the pit, they will be removed as soon as practical but in no case will they remain longer than 72 hours unless an alternative is approved by SITLA. Should timely removal prove infeasible, the pit will be netted with mesh no larger than 1 inch until such time as the hydrocarbons can be removed. Hydrocarbon removal will also take place prior to the closure of the pit, unless authorization is provided for disposal via alternative pit closure methods. (e.g. solidification)

Any additional pits necessary for subsequent operations, such as temporary flare pits, or workover pits, will contained within the originally approved well pad and disturbance boundaries. Such temporary pits will be backfilled and reclaimed within 180 days of completion of the work.

For the protection of livestock and wildlife, all open pits and cellars will be fenced/covered to prevent wildlife or livestock entry. Total height of pit fencing will be at least 42 inches and corner posts will be cemented and/or braced in such a manner as to keep the fence tight at all times. Standard steel, wood, or pipe posts shall be used between the corner braces. Maximum distance between any 2 fence posts shall be no greater than 16 feet.

Pits containing drilling cuttings, mud, and/or completions fluids will be allowed to dry. Any free fluids remaining after after six (6) months from reaching total depth, date of completion, and/or determination of inactivity will be removed (as weather conditions allow) to an approved site and the pit reclaimed. Additional drying methods may include fly-ash solidification or sprinkler evaporation. Installation and operation of any sprinklers, pumps, and equipment will ensure that water spray or mist does not drift. Reserve pit liners will be cut off or folded as near to the mud surface as possible and as safety considerations allow and buried on location.

No garbage or non-exempt substances as defined by Resource Conservation and Recovery Act (RCRA) subtitle C will be placed in the reserve pit. All refuse generated during construction, drilling, completion, and well testing activities will be contained in an enclosed receptacle, removed from the drill locations promptly, and transported to an approved disposal facility.

Portable, self-contained chemical toilets and/or sewage processing facilities will be provided for human waste disposal. Upon completion of operations, or as required, the toilet holding tanks will be pumped and the contents disposed of in an approved sewage disposal facility. All applicable regulations pertaining to disposal of human and solid waste will be observed.

Any undesirable event, including accidental release of fluids, or release in excess of reportable quantities, will be managed according to the notification requirements of UDOGMs "Reporting Oil and Gas Undesirable Events" rule. Where State wells are participatory to a Federal agreement, according to NTL-3A, the appropriate Federal agencies will be notified.

## **Materials Management**

Hazardous materials above reportable quantities will not be produced by drilling or completing proposed wells or constructing the pipelines/facilities. The term "hazardous materials" as used here means: (1) any substance, pollutant, or containment listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA; and (2) any hazardous waste as defined in RCRA of 1976, as amended. In addition, no extremely hazardous substance, as defined in 40 CFR 355, in threshold planning quantities, would be used, produced, stored, transported, or disposed of while producing any well.

Chemicals subject to reporting under Title III of the Superfund Amendments and Reauthorization Act (SARA) in quantities of 10,000 pounds or more may be produced and/or stored at production facilities and may be kept in limited quantities on drilling sites and well locations for short periods of time during drilling or completion activities.

#### G. Ancillary Facilities:

None are anticipated.

#### H. Well Site Layout (see Well Pad Design Summary):

The location, orientation and aerial extent of each drill pad; reserve/completion/flare pit; access road ingress/ egress points, drilling rig, dikes/ditches, existing wells/infrastructure; proposed cuts and fills; and topsoil and spoil material stockpile locations are depicted on the exhibits for each project, where applicable. Site-specific conditions may require slight deviation in actual equipment and facility layout; however, the area of disturbance, as described in the survey, will not be exceeded.

Coordinates are provided in the National Spatial Reference System, North American Datum, 1927 (NAD27) or latest edition. Distances are depicted on each plat to the nearest two adjacent section lines.

#### I. Plans for Reclamation of the Surface:

Surface reclamation will be undertaken in two phases: interim and final. Interim reclamation is conducted following well completion and extends through the period of production. This reclamation is for the area of the well pad that is not required for production activities. Final reclamation is conducted following well plugging/conversion and/or facility abandonment processes.

Reclamation activities in both phases may include but is not limited to the re-contouring or re-configuration of topographic surfaces, restoration of drainage systems, segregation of spoils materials, minimizing surface disturbance, re-evaluating backfill requirements, pit closure, topsoil redistribution, soil treatments, seeding and weed control.

#### **Interim Reclamation**

Interim reclamation includes pit closure, re-contouring (where possible), soil bed preparation, topsoil placement, seeding, and/or weed control.

Interim re-contouring involves bringing all construction material from cuts and fills back onto the well pad and site and reestablishing the natural contours where desirable and practical. Fill and stockpiled spoils no longer necessary to the operation will be spread on the cut slopes and covered with stockpiled topsoil. All stockpiled top soils will be used for interim reclamation where practical to maintain soil viability. Where possible, the land surface will be left "rough" after re-contouring to ensure that the maximum surface area will be available to support the reestablishment of vegetative cover.

A reserve pit, upon being allowed to dry, will be backfilled and compacted with cover materials that are void of any topsoil, vegetation, large stones, rocks or foreign objects. Soils that are moisture laden, saturated, or partially/

completely frozen will not be used for backfill or cover. The pit area will be mounded to allow for settling and to promote positive surface drainage away from the pit.

#### **Final Reclamation**

Final reclamation will be performed for newly drilled unproductive wells and/or at the end of the life of a productive well. As soon as practical after the conclusion of drilling and testing operations, unproductive drill holes will be plugged and abandoned (P&A). Site and road reclamation will commence following plugging. In no case will reclamation at non-producing locations be initiated later than six (6) months from the date a well is plugged. A joint inspection of the disturbed area to be reclaimed may be requested by KMG. The primary purpose of this inspection will be to review the existing conditions, or agree upon a revised final reclamation and abandonment plan. A Notice of Intent to Abandon will be filed for final recommendations regarding surface reclamation.

After plugging, all wellhead equipment that is no longer needed will be removed, and the well site will be reclaimed. Final contouring will blend with and follow as closely as practical the natural terrain and contours of the original site and surrounding areas. After re-contouring, final grading will be conducted over the entire surface of the well site and access road. Where practical, the area will be ripped to a depth of 18 to 24 inches on 18 to 24-inch centers and surface materials will be pitted with small depressions to form longitudinal depressions 12 to 18 inches deep perpendicular to the natural flow of water.

All unnecessary surface equipment and structures (e.g. cattle guards) and water control structures (e.g. culverts, drainage pipes) not needed to facilitate successful reclamation will be removed during final reclamation. Roads that will be reclaimed will be ripped to a depth of 18 inches where practical, re-contoured to approximate the original contour of the ground and seeded.

Upon successfully completing reclamation of a P&A location, a Final Abandonment Notice will be submitted to UDOGM.

#### Seeding and Measures Common to Interim and Final Reclamation

Reclaimed areas may be fenced to exclude grazing and encourage re-vegetation.

On slopes where severe erosion can become a problem and the use of machinery is not practical, seed will be hand broadcast and raked with twice the specified amount of seed. The slope will be stabilized using materials specifically designed to prevent erosion on steep slopes and hold seed in place so vegetation can become permanently established. These materials will include, but are not limited to, erosion control blankets and bonded fiber matrix at a rate to achieve a minimum of 80 percent soil coverage.

Seeding will occur year-round as conditions allow. Seed mixes appropriate to the native plant community as determined and specified for each project location based on the site specific soils will be used for re-vegetation. The site specific seed mix will be provided by SITLA.

#### J. Surface/Mineral Ownership:

SITLA 675 East 500 South, Suite 500 Salt Lake City, UT 84102

Morgan State 921-36G4BS/ 921-36G4CS/ 921-36J1CS/ 921-36J4BS

Surface Use Plan of Operations 8 of 9

L. Other Information:

None

RECEIVED: December 20, 2011

Morgan State 921-36G4BS/ 921-36G4CS/ 921-36J1CS/ 921-36J4BS

#### M. Lessee's or Operators' Representative & Certification:

Danielle Piernot Regulatory Analyst II Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6156 Tommy Thompson General Manager, Drilling Kerr-McGee Oil & Gas Onshore LP PO Box 173779 Denver, CO 80217-3779 (720) 929-6724

Certification: All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, Onshore Oil and Gas Orders, the approved Plan of Operations, and any applicable Notice to Lessees.

The Operator will be fully responsible for the actions of its subcontractors. A complete copy of the approved "Application for Permit to Drill" will be furnished to the field representative(s) to ensure compliance and shall be on location during all construction and drilling operations.

Kerr-McGee Oil & Gas Onshore LP is considered to be the operator of the subject well. Kerr-McGee Oil & Gas Onshore LP agrees to be responsible under terms and conditions of the lease for the operations conducted upon leased lands.

Bond coverage for State lease activities is provided by State Surety Bond 22013542, and for applicable Federal lease activities and pursuant to 43 CFR 3104, by Bureau of Land Management Nationwide Bond WYB000291.

I hereby certify that I, or persons under my supervision, have inspected the proposed drill site and access route, that I am familiar with the conditions that currently exist; that I have full knowledge of the State and Federal laws applicable to this operation; that the statements made in this plan are, to the best of my knowledge, true and correct; and the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Danielle Piernot

December 19, 2011

Date



Kerr-McGee Oil & Gas Onshore LP PO Box 173779 DENVER, CO 80217-3779

December 14, 2011

Ms. Diana Mason Division of Oil, Gas and Mining P.O. Box 145801 Salt Lake City, UT 84114-6100

Re: Directional Drilling R649-3-11 Morgan State 921-36J1CS

T9S-R21E

Section 36: NWSE (Surface), NWSE (Bottom Hole)

Surface: 2118' FSL, 1784' FEL Bottom Hole: 2303' FSL, 1800' FEL

Uintah County, Utah

Dear Ms. Mason:

Pursuant to the filing of Kerr-McGee Oil & Gas Onshore LP's (Kerr-McGee) Application for Permit to Drill regarding the above referenced well, we are hereby submitting this letter in accordance with Oil & Gas Conservation Rule R649-3-11 pertaining to Directional Drilling.

- Kerr-McGee is permitting this well as a directional well in order to minimize surface disturbance. Locating the well at the surface location and directionally drilling from this location, Kerr-McGee will be able to utilize the existing roads and pipelines in the area.
- Furthermore, Kerr-McGee certifies that it is the sole working interest owner within 460 feet of the entire directional well bore.

Therefore, based on the above stated information, Kerr-McGee Oil & Gas Onshore LP requests the permit be granted pursuant to R649-3-11.

Sincerely,

KERR-MCGEE OIL & GAS ONSHORE LP

Joe Matney Sr. Staff Landman

From: Jim Davis
To: APD APPROVAL

CC: Danielle Piernot; Julie Jacobson

**Date:** 2/23/2012 3:22 PM

**Subject:** APD Approval: the Kerr McGee Morgan State wells

The following wells have been approved by SITLA including arch and paleo clearance.

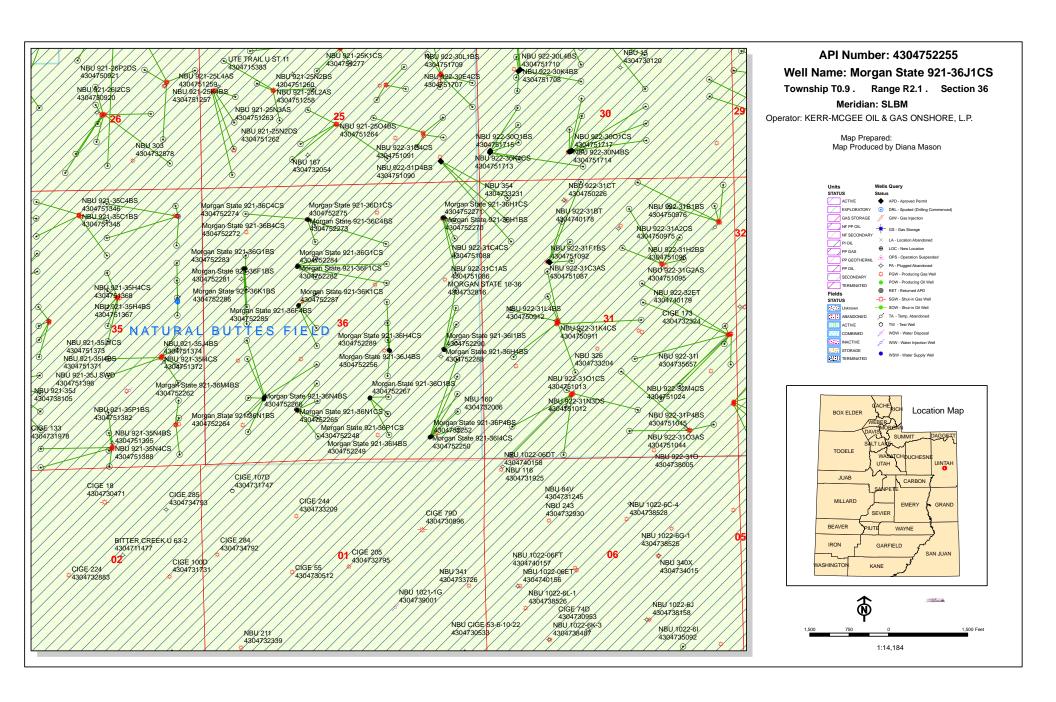
```
Morgan State 921-36G4BS
4304752246
             Morgan State 921-36G4CS
4304752253
4304752255
             Morgan State 921-36J1CS
4304752256
             Morgan State 921-36J4BS
             Morgan State 921-36F1BS
4304752281
4304752282
             Morgan State 921-36F1CS
4304752283
             Morgan State 921-36G1BS
4304752284
             Morgan State 921-36G1CS
             Morgan State 921-36F4BS
4304752285
4304752286
             Morgan State 921-36K1BS
4304752287
             Morgan State 921-36K1CS
             Morgan State 921-36P1BS
4304752247
             Morgan State 921-36P1CS
4304752248
4304752249
             Morgan State 921-36I4BS
             Morgan State 921-36I4CS
4304752250
             Morgan State 921-36P4BS
4304752252
4304752263
             Morgan State 921-36K4CS
4304752264
             Morgan State 921-36N1BS
4304752265
             Morgan State 921-36N1CS
4304752266
             Morgan State 921-36N4BS
4304752276
             Morgan State 921-36D4CS
4304752277
             Morgan State 921-36E1BS
4304752278
             Morgan State 921-36E1CS
             Morgan State 921-36E4BS
4304752279
4304752280
             Morgan State 921-36E4CS
             Morgan State 921-36O4CS
4304752245
             Morgan State 921-36O1CS
4304752254
             Morgan State 921-36O1BS
4304752267
4304752257
             Morgan State 921-36K4BS
4304752258
             Morgan State 921-36L1BS
4304752259
             Morgan State 921-36L1CS
4304752260
             Morgan State 921-36M1BS
4304752261
             Morgan State 921-36M1CS
4304752262
             Morgan State 921-36M4BS
4304752272
             Morgan State 921-36B4CS
4304752273
             Morgan State 921-36C4BS
4304752274
             Morgan State 921-36C4CS
4304752275
             Morgan State 921-36D1CS
```

There are eight more wells on two pads in this section, the 36A pad and the 36I pad, that have not yet been approved. Anadarko is gathering reclamation cost figures on pads similar to those as part of the process of acquiring adequate SITLA bonds.

-Jim

Jim Davis Utah Trust Lands Administration jimdavis1@utah.gov

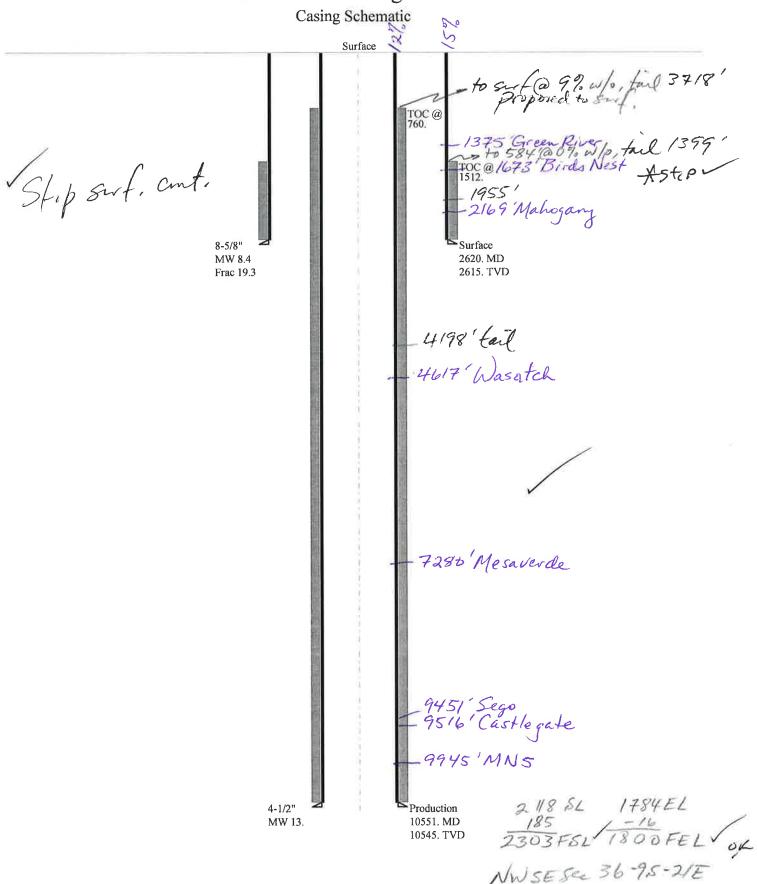
Phone: (801) 538-5156



#### BOPE REVIEW KERR-MCGEE OIL & GAS ONSHORE, L.P. Morgan State 921-36J1CS 43047522550000

Well Name	KERR-MCGEE OIL & GAS ONSHORE, L.P. Mc			E, L.P. Morgan S	State	921-36J1C	5.4				
String		Surf	Prod	丁			T.				
Casing Size(")		8.625	4.500	一	Ī		Ī		7		
Setting Depth (TVD)		2615	10545	〓	Ī		Ī				
Previous Shoe Setting Dept	h (TVD)	0	2615	一	Ī		Ī				
Max Mud Weight (ppg)		8.4	13.0	Ħ	ľ		Ī				
BOPE Proposed (psi)		500	5000	Ħ	ľ		Ī				
Casing Internal Yield (psi)		3390	10690	₹	ľ		Ī				
Operators Max Anticipated	Pressure (psi)	6960	12.7	一	ľ		Ī				
			12		12		11.				
Calculations		Surf Stri			_	1 *2 (7)	_	8.625			
Max BHP (psi)			)52*Sett	ing L	Je:	pth*MW=	11	42	DODE A	da	guete For Duilling And Setting Cooling at Double
MASP (Gas) (psi)		Max RH	(P-(0 12*	Sett	in	g Depth)=				Lue	quate For Drilling And Setting Casing at Depth?
MASP (Gas/Mud) (psi)					_	75	82		NO	=	air drill
WASF (Gas/Muu) (psi)		мах вп	P-(0.22*	Setti	111	g Depth)=	56	7	*Con Fi	.11	Reasonable depth in area  Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(S	etting Depth	- Previo	us St	10	e Denth)=	56	- i			Expected Fressure Be field At Frevious Since.
Required Casing/BOPE Tes		etting Beptin				c Beptili)	H		psi	_	
*Max Pressure Allowed @		Shoe-		_	_		23	73	-	Λ	umes 1psi/ft frac gradient
Max Tressure Anowed &	Trevious Casing				_		0		psi	133	unies Tpsi/It frac gradient
Calculations		Prod Str	ing					4.500	"		
Max BHP (psi)		.(	)52*Sett	ing Γ	)e	pth*MW=	71	28			
						BOPE A	de	quate For Drilling And Setting Casing at Depth?			
MASP (Gas) (psi)		Мах ВН	P-(0.12*	'Setti	in	g Depth)=	58	63	NO		
MASP (Gas/Mud) (psi)		Max BH	P-(0.22*	'Setti	in	g Depth)=	48	08	YES		ОК
									*Can Fu	ıll 1	Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe		etting Depth	- Previo	us Sh	10	e Depth)=	53	83	NO		Reasonable
Required Casing/BOPE Tes	st Pressure=						50	00	psi		
*Max Pressure Allowed @ 1	Previous Casing	Shoe=					26	15	psi *	Ass	umes 1psi/ft frac gradient
Calculations		String		_	_		_		"	_	
Max BHP (psi)				ing Γ	)e	pth*MW=	Г				
							1_		BOPE A	de	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		Max BH	P-(0.12*	Sett	in	g Depth)=		ĺ	NO		
MASP (Gas/Mud) (psi)		Max BH	P-(0.22*	Sett	in	g Depth)=	Ī		NO	=	
									*Can Fu	ıll l	Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(S	etting Depth	- Previo	us Sh	10	e Depth)=			NO		
Required Casing/BOPE Tes	st Pressure=								psi		
*Max Pressure Allowed @	Previous Casing	Shoe=							psi *	Ass	umes 1psi/ft frac gradient
Calculations		Ctuins							"		,
Max BHP (psi)		String		ing F	)e	pth*MW=	_			_	
(Pos.)		. (	.52 5011	<sub>5</sub> L		r	<u> </u>		BOPE A	de	quate For Drilling And Setting Casing at Depth?
MASP (Gas) (psi)		Max BH	IP-(0.12*	Sett	in	g Depth)=	Г	í	NO		, g governg valuing at 2 cpm.
MASP (Gas/Mud) (psi)					_	g Depth)=	<u></u>		NO	=	<u>'</u>
					_	/	!		1	ıll l	Expected Pressure Be Held At Previous Shoe?
Pressure At Previous Shoe	Max BHP22*(S	etting Depth	- Previo	us Sł	10	e Depth)=	Г	ĺ	NO	_	i i
Required Casing/BOPE Tes	st Pressure=						_		psi	_	
*Max Pressure Allowed @ :	Previous Casing	Shoe=		_	_		<u>,                                     </u>		psi *	Ass	umes 1psi/ft frac gradient

## 43047522550000 Morgan State 921-36J1CS



Well name:

43047522550000 Morgan State 921-36J1CS

Operator:

KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type:

Surface

Project ID:

43-047-52255

Location:

**UINTAH** 

COUNTY

**Environment:** Minimum design factors:

Collapse Collapse: Design factor

Mud weight: 8.400 ppg

1.125

H2S considered?

No 74 °F

Design is based on evacuated pipe.

Surface temperature: 111 °F Bottom hole temperature: 1.40 °F/100ft Temperature gradient:

Minimum section length:

100 ft

Burst:

Design factor

Tension:

8 Round STC:

8 Round LTC:

1.00

1.80 (J)

1.70 (J)

Cement top:

1,512 ft

**Burst** 

Max anticipated surface

pressure: Internal gradient: Calculated BHP

Design parameters:

2,301 psi 0.120 psi/ft

No backup mud specified.

2,615 psi

Premium:

1.60 (J) Buttress: 1.50 (J) 1.50 (B) Body yield:

Tension is based on air weight. 2,295 ft Neutral point:

Directional Info - Build & Drop

300 ft Kick-off point Departure at shoe: 155 ft Maximum dogleg: 2 °/100ft

Inclination at shoe: Re subsequent strings:

Next setting depth: Next mud weight: Next setting BHP:

10,545 ft 13.000 ppg 7,121 psi 19.250 ppg

4°

Fracture mud wt: Fracture depth: Injection pressure:

2,615 ft 2,615 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2 <b>6</b> 20	8.625	28.00	I-55	LT&C	2615	2620	7.892	103752
Run Seq	Collapse Load (psi) 1141	Collapse Strength (psi) 1880	Collapse Design Factor 1.648	Burst Load (psi) 2615	Burst Strength (psi) 3390	Burst Design Factor 1.30	Tension Load (kips) 73.2	Tension Strength (kips) 348	Tension Design Factor 4.75 J

Prepared

Helen Sadik-Macdonald

Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: February 23,2012 Salt Lake City, Utah

Collapse is based on a vertical depth of 2615 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43047522550000 Morgan State 921-36J1CS Well name:

KERR-MCGEE OIL & GAS ONSHORE, L.P. Operator:

Project ID: String type: Production 43-047-52255

**UINTAH** COUNTY Location:

Minimum design factors: **Environment:** Design parameters: Collapse: H2S considered? No **Collapse** 

74 °F Mud weight: 13.000 ppg Design factor 1.125 Surface temperature: 222 °F Bottom hole temperature: Design is based on evacuated pipe.

1.40 °F/100ft Temperature gradient: Minimum section length: 100 ft

Burst: Design factor 1.00 Cement top: 760 ft

**Burst** Max anticipated surface

pressure: 4,801 psi Directional Info - Build & Drop Internal gradient: 0.220 psi/ft Tension: Calculated BHP 7,121 psi 8 Round STC: 1.80 (J) Kick-off point 300 ft 8 Round LTC: 1.80 (J) Departure at shoe: 186 ft

2 °/100ft No backup mud specified. Buttress: 1.60 (J) Maximum dogleg: 0 ° Inclination at shoe: Premium: 1.50 (J)

1.60 (B)

Tension is based on air weight. Neutral point: 8,502 ft

Estimated cost: 158,745 (\$)

Body yield:

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.	
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost	
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)	
2	5000	4.5	11.60	HCP-110	DQX	4994	5000	3.875	132000	
1	5551	4.5	11.60	HCP-110	LT&C	10545	10551	3.875	26745	
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor	
2	3372	8131	2.411	5900	10690	1.81	122.3	367.2	3.00 B	
	0012	0101			.0000					

Helen Sadik-Macdonald Prepared by: Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940

Date: February 23,2012 Salt Lake City, Utah

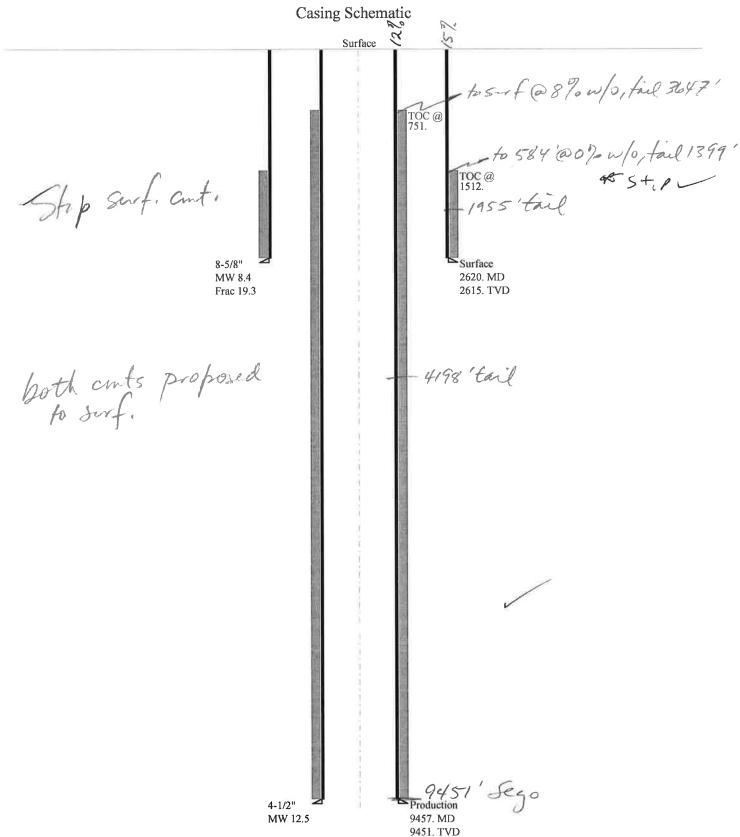
Remarks:

Collapse is based on a vertical depth of 10545 ft, a mud weight of 13 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43047522550000 Morgan State 921-36J1CS



Well name: 43047522550000 Morgan State 921-36J1CS

Operator: KERR-MCGEE OIL & GAS ONSHORE, L.P.

String type: Surface Project ID: 43-047-52255

Location: UINTAH COUNTY

Minimum design factors: **Environment:** Design parameters: Collapse: H2S considered? No **Collapse** 74 °F Mud weight: 8,400 ppg Design factor 1.125 Surface temperature: 111 °F Bottom hole temperature: Design is based on evacuated pipe. 1.40 °F/100ft Temperature gradient: Minimum section length: 100 ft Burst: Design factor 1.00 Cement top: 1,512 ft **Burst** Max anticipated surface pressure: 2,301 psi 0.120 psi/ft Directional Info - Build & Drop Internal gradient: **Tension:** Kick-off point Calculated BHP 8 Round STC: 1.80 (J) 300 ft 2,615 psi 8 Round LTC: 1.70 (J) Departure at shoe: 155 ft 2 °/100ft No backup mud specified. Buttress: 1.60 (J) Maximum dogleg: 4 ° 1.50 (J) Inclination at shoe: Premium: Re subsequent strings: Body yield: 1.50 (B) Next setting depth: 9,451 ft Next mud weight: 12.500 ppg Tension is based on air weight. Neutral point: 2,295 ft Next setting BHP: 6,137 psi 19.250 ppg Fracture mud wt: Fracture depth: 2,615 ft

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length (ft)	Size (in)	Weight (lbs/ft)	Grade	Finish	Depth (ft)	Depth (ft)	Diameter (in)	Cost (\$)
1	2620	8.625	28.00	I-55	LT&C	2615	2620	7.892	103752
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load (psi)	Strength (psi)	Design Factor	Load (psi)	Strength (psi)	Design Factor	Load (kips)	Strength (kips)	Design Factor
1	1141	1880	1.648	2615	3390	1.30	73.2	348	4.75 J

Prepared Helen Sadik-Macdonald by: Div of Oil, Gas & Mining

Phone: 801 538-5357 FAX: 801-359-3940 Date: February 23,2012 Salt Lake City, Utah

Injection pressure:

2,615 psi

Remarks:

Collapse is based on a vertical depth of 2615 ft, a mud weight of 8.4 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

43047522550000 Morgan State 921-36J1CS Well name:

KERR-MCGEE OIL & GAS ONSHORE, L.P. Operator:

Production Project ID: String type: 43-047-52255

COUNTY UINTAH Location:

Minimum design factors: **Environment:** Design parameters: H2S considered? Collapse Collapse: No 74 °F Surface temperature: Mud weight: 12.500 ppg Design factor 1.125 Bottom hole temperature: 206 °F Internal fluid density: 1.000 ppg Temperature gradient: 1.40 °F/100ft

Minimum section length: 100 ft

Directional Info - Build & Drop

751 ft

300 ft

186 ft

2 °/100ft

Cement top:

Kick-off point

Departure at shoe:

Maximum dogleg:

Inclination at shoe:

Burst: Design factor

**Burst** 

Max anticipated surface pressure: 4,058 psi

Internal gradient: 0.220 psi/ft

Calculated BHP 6,137 psi

No backup mud specified.

Tension: 8 Round STC:

1.80 (J) 8 Round LTC: 1.80 (J) Buttress: 1.60 (J)

1.00

1.50 (J)

1.60 (B)

Premium: Body yield:

Tension is based on air weight. Neutral point: 7,691 ft

Estimated cost: 190,832 (\$)

Run	Segment		Nominal		End	True Vert	Measured	Drift	Est.
Seq	Length	Size	Weight	Grade	Finish	Depth	Depth	Diameter	Cost
	(ft)	(in)	(lbs/ft)			(ft)	(ft)	(in)	(\$)
2	5000	4.5	11.60	1-80	DQX	4994	5000	3.875	132000
1	4457	4.5	11.60	1-80	LT&C	9451	9457	3.875	58832
Run	Collapse	Collapse	Collapse	Burst	Burst	Burst	Tension	Tension	Tension
Seq	Load	Strength	Design	Load	Strength	Design	Load	Strength	Design
	(psi)	(psi)	Factor	(psi)	(psi)	Factor	(kips)	(kips)	Factor
2	2983	5918	1.984	5156	7780	1.51	109.6	267	2.44 J
1	5646	6360	1.126	6137	7780	1.27	51.7	212	4.10 J

Helen Sadik-Macdonald Prepared Div of Oil, Gas & Mining by:

Phone: 801 538-5357 FAX: 801-359-3940

Date: February 23,2012 Salt Lake City, Utah

Collapse is based on a vertical depth of 9451 ft, a mud weight of 12.5 ppg. An internal gradient of .052 psi/ft was used for collapse from TD Collapse strength is based on the Westcott, Dunlop & Kemler method of blaxial correction for tension.

Burst strength is not adjusted for tension.

Collapse strength is (biaxially) derated for doglegs in directional wells by multiplying the tensile stress by the cross section area to calculate a

## ON-SITE PREDRILL EVALUATION

## Utah Division of Oil, Gas and Mining

**Operator** KERR-MCGEE OIL & GAS ONSHORE, L.P.

Well Name Morgan State 921-36J1CS

API Number 43047522550000 APD No 5082 Field/Unit NATURAL BUTTES

Location: 1/4,1/4 NWSE Sec 36 Tw 9.0S Rng 21.0E 2118 FSL 1784 FEL

GPS Coord (UTM) 628313 4427861 Surface Owner

#### **Participants**

Sheila Wopsock, Charles Chase, Danielle Piernot, Doyle Holmes, (Anadarko). John Slaugh, Mitch Batty, (Timberline). Jim Davis (SITLA). Alex Hansen (DWR). Chris Jensen and David Hackford, (DOGM).

#### Regional/Local Setting & Topography

This site is on an existing location, and very little new construction will be necessary.

This location is within the Natural Buttes Unit but this section is not part of the Natural Buttes Unit. It is approximately 14 road miles southeast of Ouray, Utah. The general area is at the head of a long unnamed wash east of Cottonwood Wash. Both washes enter the White River in the same general area, approximately six miles to the north. The area is characterized by rolling hills, which are frequently divided by somewhat gentle draws that drain northerly. This unnamed wash is an ephemeral drainage. No springs, seeps or streams exist in the area. An occasional pond constructed to supply water for cattle and antelope exists. The washes are sometimes rimmed with steep side hills, which have exposed sandstone bedrock cliffs along the rims.

Four new directional wells will be drilled from this location which currently has one well, the Morgan State 5-36. The decision to PA or TA this existing well hasn't been made at this time.

#### Surface Use Plan

**Current Surface Use** 

Grazing Wildlfe Habitat Existing Well Pad

New Road Miles Well Pad Src Const Material Surface Formation

0 Width 345 Length 445 Onsite UNTA

Ancillary Facilities N

Waste Management Plan Adequate? Y

#### **Environmental Parameters**

Affected Floodplains and/or Wetlands N

Flora / Fauna

3/20/2012 Page 1

Prickly pear, wild onion, shadscale, mat saltbrush, Indian ricegrass, halogeton, pepper grass. Principal species present are cheatgrass, black sagebrush, stipa, mesquite grass.

Sheep, antelope, coyote, raptors, small mammals and birds.

#### Soil Type and Characteristics

Rocky sandy clay loam.

**Erosion Issues** N

**Sedimentation Issues** N

Site Stability Issues N

Drainage Diverson Required? N

Berm Required? N

Erosion Sedimentation Control Required? N

Paleo Survey Run? Y Paleo Potental Observed? N Cultural Survey Run? Y Cultural Resources? N

#### Reserve Pit

Site-Specific Factors	Site Ran	king	
Distance to Groundwater (feet)	> 200	0	
Distance to Surface Water (feet)	>1000	0	
Dist. Nearest Municipal Well (ft)	>5280	0	
Distance to Other Wells (feet)		20	
Native Soil Type	Mod permeability	10	
Fluid Type	Fresh Water	5	
Drill Cuttings	Normal Rock	0	
<b>Annual Precipitation (inches)</b>		0	
Affected Populations			
Presence Nearby Utility Conduits	Not Present	0	
	Final Score	35	1 Sensitivity Level

#### Characteristics / Requirements

The reserve pit is planned in an area of cut on the south corner of the location. Dimensions are 260' x 120' x 12' deep with two feet of freeboard. Kerr McGee has agreed to line this pit with a 30 mil synthetic liner and a layer of felt sub-liner.

Closed Loop Mud Required? N Liner Required? Y Liner Thickness 30 Pit Underlayment Required? Y

#### Other Observations / Comments

Evaluator	Date / Time
David Hackford	1/11/2012

3/20/2012 Page 2

# Application for Permit to Drill Statement of Basis

3/20/2012 Utah Division of Oil, Gas and Mining

Page 1

APD No API WellNo Status Well Type Surf Owner CBM

5082 43047522550000 SITLA GW S No

Operator KERR-MCGEE OIL & GAS ONSHORE, L.P. Surface Owner-APD

Well Name Morgan State 921-36J1CS Unit

Field NATURAL BUTTES Type of Work DRILL

Location NWSE 36 9S 21E S 2118 FSL 1784 FEL GPS Coord

(UTM) 628324E 4427853N

#### **Geologic Statement of Basis**

Kerr McGee proposes to set 2,620' of surface casing at this location. The depth to the base of the moderately saline water at this location is estimated to be at a depth of 1,500'. A search of Division of Water Rights records shows one water well within a 10,000 foot radius of the center of Section 36. The well is listed as 2,640 feet deep and used for drilling water. The surface formation at this site is the Uinta Formation. The Uinta Formation is made up of interbedded shales and sandstones. The sandstones are mostly lenticular and discontinuous and should not be a significant source of useable ground water. The proposed casing and cement should adequately protect. Any usable ground water.

Brad Hill **APD Evaluator** 

2/1/2012 **Date / Time** 

#### **Surface Statement of Basis**

The general area is in the central portion of the Natural Buttes Unit. Within this area is the White River and rugged drainages that drain into it. Topography is varied and frequently dissected by short draws or washes, which become overly steep as they approach the White River breaks or rim. Distance to the White River is six miles. The side drainages are dry except for ephemeral flows. No seeps or springs exist in the area. An occasional pond has been constructed to supply water for livestock and antelope. Vernal, Utah is approximately 43.2 miles to the northwest. Access from Vernal is by following Utah State, Uintah County and oilfield development roads.

Four wells will be directionally drilled from this location. They are the Morgan State 921-36G4CS, Morgan State 921-36J4BS, Morgan State 921-36G4BS and the Morgan State 921-36J1CS. The existing location currently has one well. This well is the Morgan State 5-36. The decision to PA or TA this well has not been made at this time. No drainage concerns exist, and no diversions will be needed. The pad as modified should be stable and sufficient for five wells, and is the best site for a location in the immediate area.

New construction will consist of approximately 100 feet on the south, 100 feet on the west, 50 feet on the north, and 75 feet on the east side of the existing location.

Both the surface and minerals are owned by SITLA. Jim Davis of SITLA and Alex Hansen with DWR were invited by email to the pre-site evaluation. Both were present. Kerr McGee personnel were told to consult with SITLA for reclamation standards including seeding mixes to be used.

David Hackford
Onsite Evaluator

1/11/2012 **Date / Time** 

RECEIVED: March 20, 2012

# **Application for Permit to Drill Statement of Basis**

Utah Division of Oil, Gas and Mining

Page 2

#### Conditions of Approval / Application for Permit to Drill

Category Condition

Pits A synthetic liner with a minimum thickness of 16 mils with a felt subliner shall be properly installed

and maintained in the reserve pit.

Pits The reserve pit should be located on the south side of the location.

RECEIVED: March 20, 2012

#### **WORKSHEET** APPLICATION FOR PERMIT TO DRILL

**APD RECEIVED:** 12/20/2011 API NO. ASSIGNED: 43047522550000

WELL NAME: Morgan State 921-36J1CS

OPERATOR: KERR-MCGEE OIL & GAS ONSHORE, L.P. (N2995) PHONE NUMBER: 720 929-6156

**CONTACT:** Danielle Piernot

PROPOSED LOCATION: NWSE 36 090S 210E Permit Tech Review:

> **SURFACE: 2118 FSL 1784 FEL** Engineering Review:

> **BOTTOM: 2303 FSL 1800 FEL** Geology Review:

**COUNTY: UINTAH** 

**LATITUDE: 39.99111** LONGITUDE: -109.49689 UTM SURF EASTINGS: 628324.00 NORTHINGS: 4427853.00

FIELD NAME: NATURAL BUTTES

LEASE TYPE: 3 - State

LEASE NUMBER: ML 22265 PROPOSED PRODUCING FORMATION(S): BLACKHAWK

SURFACE OWNER: 3 - State **COALBED METHANE: NO** 

**RECEIVED AND/OR REVIEWED: LOCATION AND SITING:** 

✓ PLAT R649-2-3.

Bond: STATE/FEE - 22013542 Unit:

**Potash** R649-3-2. General

Oil Shale 190-5

Oil Shale 190-3 R649-3-3. Exception

**Drilling Unit** Oil Shale 190-13

Board Cause No: Cause 173-24 Water Permit: 43-8496

Effective Date: 10/5/2009 **RDCC Review:** 

Siting: 460' Fr Exterior Lease Boundary Fee Surface Agreement

✓ Intent to Commingle R649-3-11. Directional Drill

**Commingling Approved** 

Comments: Presite Completed

Stipulations:

3 - Commingling - ddoucet 5 - Statement of Basis - bhill 15 - Directional - dmason 17 - Oil Shale 190-5(b) - dmason 25 - Surface Casing - ddoucet



## State of Utah

DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

#### Permit To Drill

\*\*\*\*\*\*\*

Well Name: Morgan State 921-36J1CS

**API Well Number:** 43047522550000

Lease Number: ML 22265 Surface Owner: STATE Approval Date: 3/20/2012

#### Issued to:

KERR-MCGEE OIL & GAS ONSHORE, L.P., P.O. Box 173779, Denver, CO 80217

#### Authority:

Pursuant to Utah Code Ann. 40-6-1 et seq., and Utah Administrative Code R649-3-1 et seq., the Utah Division of Oil, Gas and Mining issues conditions of approval, and permit to drill the listed well. This permit is issued in accordance with the requirements of Cause 173-24. The expected producing formation or pool is the BLACKHAWK Formation(s), completion into any other zones will require filing a Sundry Notice (Form 9). Completion and commingling of more than one pool will require approval in accordance with R649-3-22.

#### **Duration:**

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date

#### **Commingle:**

In accordance with Board Cause No. 173-24, commingling of the production from the Wasatch formation and the Mesaverde formation in this well is allowed.

#### General:

Compliance with the requirements of Utah Admin. R. 649-1 et seq., the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

#### Conditions of Approval:

Compliance with the Conditions of Approval/Application for Permit to Drill outlined in the Statement of Basis (copy attached).

In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

In accordance with the Order in Cause No. 190-5(b) dated October 28, 1982, the operator shall comply with the requirements of Rules R649-3-31 and R649-3-27 pertaining to Designated Oil Shale Areas. Additionally, the operators shall ensure that the surface and or production casing is properly cemented over the entire oil

shale section as defined by Rule R649-3-31. The Operator shall report the actual depth the oil shale is encountered to the division.

Surface casing shall be cemented to the surface.

#### **Additional Approvals:**

The operator is required to obtain approval from the Division of Oil, Gas and mining before performing any of the following actions during the drilling of this well:

- Any changes to the approved drilling plan contact Dustin Doucet
- Significant plug back of the well contact Dustin Doucet
- Plug and abandonment of the well contact Dustin Doucet

#### **Notification Requirements:**

The operator is required to notify the Division of Oil, Gas and Mining of the following actions during drilling of this well:

• Within 24 hours following the spudding of the well - contact Carol Daniels OR

submit an electronic sundry notice (pre-registration required) via the Utah Oil & Gas website

at http://oilgas.ogm.utah.gov

- 24 hours prior to testing blowout prevention equipment contact Dan Jarvis
- 24 hours prior to cementing or testing casing contact Dan Jarvis
- Within 24 hours of making any emergency changes to the approved drilling program
  - contact Dustin Doucet
- 24 hours prior to commencing operations to plug and abandon the well contact Dan Jarvis

#### **Contact Information:**

The following are Division of Oil, Gas and Mining contacts and their telephone numbers (please leave a voicemail message if the person is not available to take the call):

- Carol Daniels 801-538-5284 office
- Dustin Doucet 801-538-5281 office

801-733-0983 - after office hours

• Dan Jarvis 801-538-5338 - office

801-231-8956 - after office hours

#### Reporting Requirements:

All reports, forms and submittals as required by the Utah Oil and Gas Conservation General Rules will be promptly filed with the Division of Oil, Gas and Mining, including but not limited to:

- Entity Action Form (Form 6) due within 5 days of spudding the well
- Monthly Status Report (Form 9) due by 5th day of the following calendar month
  - Requests to Change Plans (Form 9) due prior to implementation
  - Written Notice of Emergency Changes (Form 9) due within 5 days
- Notice of Operations Suspension or Resumption (Form 9) due prior to implementation
  - Report of Water Encountered (Form 7) due within 30 days after completion
  - Well Completion Report (Form 8) due within 30 days after completion or

Approved By:

For John Rogers Associate Director, Oil & Gas Sundry Number: 29187 API Well Number: 43047522550000

	STATE OF UTAH		FORM 9			
ı	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING	G	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22265			
SUNDR	Y NOTICES AND REPORTS ON	I WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:			
	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizontal n for such proposals.		7.UNIT or CA AGREEMENT NAME:			
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: MORGAN STATE 921-36J1CS			
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		9. API NUMBER: 43047522550000			
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	PH n Street, Suite 600, Denver, CO, 80217 37	<b>ONE NUMBER:</b> 79 720 929-6	9. FIELD and POOL or WILDCAT: 5NATUERAL BUTTES			
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2118 FSL 1784 FEL			COUNTY: UINTAH			
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 36 Township: 09.0S Range: 21.0E Meridian:	: S	STATE: UTAH			
11. CHECI	K APPROPRIATE BOXES TO INDICATE N	NATURE OF NOTICE, REPOR	RT, OR OTHER DATA			
TYPE OF SUBMISSION		TYPE OF ACTION				
	ACIDIZE	ALTER CASING	CASING REPAIR			
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME			
SUBSEQUENT REPORT	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE			
Date of Work Completion:	L DEEPEN L	FRACTURE TREAT	NEW CONSTRUCTION			
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK			
SPUD REPORT Date of Spud:	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION			
Said G. Gpau.	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON			
,	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL			
DRILLING REPORT Report Date:	□ WATER SHUTOFF □	SI TA STATUS EXTENSION	APD EXTENSION			
8/22/2012	WILDCAT WELL DETERMINATION	OTHER	OTHER:			
MIRU TRIPLE A BU RAN 14" 36.7# SC	COMPLETED OPERATIONS. Clearly show all p CKET RIG. DRILLED 20" CONDU HEDULE 10 CONDUCTOR PIPE X. SPUD WELL LOCATION ON A 07:00 HRS.	JCTOR HOLE TO 40'. . CEMENT WITH 28	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY August 24, 2012			
NAME (PLEASE PRINT) Jaime Scharnowske	<b>PHONE NUMBER</b> 720 929-6304	TITLE Regulartory Analyst				
SIGNATURE N/A		DATE 8/23/2012				

SUBMIT AS EMAIL

Print Form

## BLM - Vernal Field Office - Notification Form

Operator KERR-McGEE OIL & GAS Rig Name/# BUCKET RIG
Submitted By J. Scharnowske Phone Number 720.929.6304
Well Name/Number MORGAN STATE 921-36J1CS
Qtr/Qtr NWSE Section 36 Township 9S Range 21E
Lease Serial Number ML 22265
API Number 4304752255
<u>Spud Notice</u> – Spud is the initial spudding of the well, not drilling out below a casing string.
Date/Time <u>08/20/2012</u> <u>11:00 HRS</u> AM PM
Casing — Please report time casing run starts, not cementing times.  ✓ Surface Casing  Intermediate Casing  Production Casing  Liner  Other
Date/Time 09/01/2012 08:00 HRS AM PM
BOPE Initial BOPE test at surface casing point BOPE test at intermediate casing point 30 day BOPE test Other
Date/Time AM
Remarks ESTIMATED DATE AND TIME. PLEASE CONTACT KENNY GATHINGS AT
435.828.0986 OR LOVEL YOUNG AT 435.781.7051

### STATE OF UTAH D

DEPARTMENT OF N	ATURAL RES	OURCES
IVISION OF OIL	GAS AND	MINING

## **ENTITY ACTION FORM**

Operator:

KERR McGEE OIL & GAS ONSHORE LP

Operator Account Number: N 2995

Address:

P.O. Box 173779

city DENVER

state CO

zip 80217

Phone Number: <u>(720)</u> 929-6304

#### Well 1

API Number	Well	Name	QQ	Sec	Twp	Rng	County		
4304752255	Morgan State 921-36J1CS		NWSE	NWSE 36 9S			UINTAH		
Action Code	Current Entity Number	New Entity Number	S	Spud Date			Entity Assignment Effective Date		
Α	9999	18693	8	3/22/201	2	818	38 13013		
Comments: MIRU	TRIPLE A BUCKET F	RIG	BH	L: Nu	use				

SPUD WELL LOCATION ON 8/22/2012 AT 07:00 HRS.

MVRD

#### Well 2

API Number	Well Name		QQ	QQ Sec Twp			Rng County		
Action Code	Current Entity Number	Spud Date			Entity Assignment Effective Date				
comments:							<del></del>		

#### Well 3

API Number	Well I	Name	QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	S	pud Da	te		y Assignment fective Date
Comments:						<u></u>	

#### **ACTION CODES:**

- A Establish new entity for new well (single well only)
- **B** Add new well to existing entity (group or unit well)
- C Re-assign well from one existing entity to another existing entity
- D Re-assign well from one existing entity to a new entity

  (Table in (comments) section)

JAIME SCHARNOWSKE

Name (Please Print)

in Schaumusk

Signature

Title

**REGULATORY ANALYST** 

8/24/2012

Date

AUG 2 7 2012

Sundry Number: 30513 API Well Number: 43047522550000

	STATE OF UTAH		FORM 9
I	DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MININ	G	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
	I WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:	
Do not use this form for procurrent bottom-hole depth, FOR PERMIT TO DRILL form	posals to drill new wells, significantly dee reenter plugged wells, or to drill horizontal n for such proposals.	pen existing wells below laterals. Use APPLICATION	7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: MORGAN STATE 921-36J1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.		<b>9. API NUMBER:</b> 43047522550000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	PH h Street, Suite 600, Denver, CO, 80217 37	<b>ONE NUMBER:</b> 79 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2118 FSL 1784 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH Qtr/Qtr: NWSE Section: 3	HIP, RANGE, MERIDIAN: 36 Township: 09.0S Range: 21.0E Meridian	: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICATE I	NATURE OF NOTICE, REPOR	T, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	CHANGE TO PREVIOUS PLANS  CHANGE WELL STATUS  DEEPEN  OPERATOR CHANGE  PRODUCTION START OR RESUME  REPERFORATE CURRENT FORMATION  TUBING REPAIR  WATER SHUTOFF  WILDCAT WELL DETERMINATION  COMPLETED OPERATIONS. Clearly show all phe month of September 2012.		CASING REPAIR  CHANGE WELL NAME  CONVERT WELL TYPE  NEW CONSTRUCTION  PLUG BACK  RECOMPLETE DIFFERENT FORMATION  TEMPORARY ABANDON  WATER DISPOSAL  APD EXTENSION  OTHER:  Pepths, volumes, etc.  Accepted by the Utah Division of Oil, Gas and Mining  FOR RECORD ONLY  October 03, 2012
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUMBER</b> 720 929-6857	TITLE Regulatory Analyst II	
SIGNATURE N/A		<b>DATE</b> 10/3/2012	

Sundry Number: 30824 API Well Number: 43047522550000

	STATE OF UTAH		FORM 9
	DEPARTMENT OF NATURAL RESOURCE DIVISION OF OIL, GAS, AND MIN		5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
SUNDR	RY NOTICES AND REPORTS (	ON WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
	oposals to drill new wells, significantly of reenter plugged wells, or to drill horizon n for such proposals.		7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well			8. WELL NAME and NUMBER: MORGAN STATE 921-36J1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	NSHORE, L.P.		9. API NUMBER: 43047522550000
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18tl	h Street, Suite 600, Denver, CO, 80217	<b>PHONE NUMBER:</b> 3779 720 929-0	9. FIELD and POOL or WILDCAT: 5M&TURAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2118 FSL 1784 FEL			COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>HIP, RANGE, MERIDIAN:</b> 36 Township: 09.0S Range: 21.0E Merid	an: S	STATE: UTAH
11. CHEC	K APPROPRIATE BOXES TO INDICAT	E NATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION		TYPE OF ACTION	
	ACIDIZE	ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start:	CHANGE WELL STATUS	COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	FRACTURE TREAT	☐ NEW CONSTRUCTION
	OPERATOR CHANGE	PLUG AND ABANDON	PLUG BACK
SPUD REPORT	PRODUCTION START OR RESUME	RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	SIDETRACK TO REPAIR WELL	TEMPORARY ABANDON
	TUBING REPAIR	VENT OR FLARE	WATER DISPOSAL
✓ DRILLING REPORT			
Report Date: 10/4/2012	WATER SHUTOFF	SI TA STATUS EXTENSION	APD EXTENSION
	WILDCAT WELL DETERMINATION	OTHER	OTHER:
FINISHED DRI PRODUCTION C DETAILS OF CASIN	COMPLETED OPERATIONS. Clearly show a ILLING TO 10,550' ON 10/02/2 CASING. RELEASED H&P 298 G AND CEMENT WILL BE INCL EPORT. WELL IS WAITING ON ACTIVITIES	2012. CEMENTED RIG ON 10/04/2012. UDED WITH THE WELL	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY October 16, 2012
NAME (PLEASE PRINT) Lindsey Frazier	PHONE NUMBI 720 929-6857	R TITLE Regulatory Analyst II	
SIGNATURE		DATE	
N/A		10/8/2012	

Sundry Number: 32845 API Well Number: 43047522550000

	STATE OF UTAH				FORM 9
ι	DEPARTMENT OF NATURAL RESOUF DIVISION OF OIL, GAS, AND M			5.LEASE DESIGNATI ML 22265	ON AND SERIAL NUMBER:
SUNDR	RY NOTICES AND REPORTS	WELLS	6. IF INDIAN, ALLOT	TEE OR TRIBE NAME:	
	posals to drill new wells, significantl reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or CA AGRE	EMENT NAME:
1. TYPE OF WELL Gas Well				8. WELL NAME and I	
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 4304752255000	0
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		<b>NE NUMBER:</b> 9 720 929-6	9. FIELD and POOL 5NATURAL BUTTES	
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2118 FSL 1784 FEL				COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 36 Township: 09.0S Range: 21.0E Mei	ridian: \$	S	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NA	ATURE OF NOTICE, REPOR	T, OR OTHER DA	TA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE	A	LTER CASING	CASING REPAI	R
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	□ c	HANGE TUBING	CHANGE WELI	- NAME
	CHANGE WELL STATUS	□ c	OMMINGLE PRODUCING FORMATIONS	CONVERT WEI	L TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT	☐ NEW CONSTR	UCTION
	OPERATOR CHANGE	Пр	LUG AND ABANDON	PLUG BACK	
	PRODUCTION START OR RESUME		ECLAMATION OF WELL SITE		DIFFERENT FORMATION
SPUD REPORT Date of Spud:					
	REPERFORATE CURRENT FORMATION		IDETRACK TO REPAIR WELL	☐ TEMPORARY	
✓ DRILLING REPORT	L TUBING REPAIR		ENT OR FLARE	WATER DISPO	
Report Date: 12/4/2012	WATER SHUTOFF	⊔ s	I TA STATUS EXTENSION	APD EXTENSIO	ON
12/1/2012	WILDCAT WELL DETERMINATION	ه ⊔ ه	THER	OTHER:	
No Activity for th	COMPLETED OPERATIONS. Clearly shown in a month of November 201	2. W	ell TD at 10,550.	Accepted Utah Div Oil, Gas ar FOR REC	ision of
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUM</b> 720 929-6857	IBER	TITLE Regulatory Analyst II		
SIGNATURE N/A			<b>DATE</b> 12/4/2012		

Sundry Number: 33556 API Well Number: 43047522550000

	STATE OF UTAH			FORM 9
ι	DEPARTMENT OF NATURAL RESOL DIVISION OF OIL, GAS, AND N		ì	5.LEASE DESIGNATION AND SERIAL NUMBER: ML 22265
SUNDR	WELLS	6. IF INDIAN, ALLOTTEE OR TRIBE NAME:		
	posals to drill new wells, significant reenter plugged wells, or to drill hor n for such proposals.			7.UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL Gas Well				8. WELL NAME and NUMBER: MORGAN STATE 921-36J1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUMBER: 43047522550000
<b>3. ADDRESS OF OPERATOR:</b> P.O. Box 173779 1099 18th	n Street, Suite 600, Denver, CO, 80		<b>NE NUMBER:</b> 9 720 929-6	9. FIELD and POOL or WILDCAT: 5NIATUERAL BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2118 FSL 1784 FEL				COUNTY: UINTAH
QTR/QTR, SECTION, TOWNSH	<b>HP, RANGE, MERIDIAN:</b> 86 Township: 09.0S Range: 21.0E Me	eridian:	S	STATE: UTAH
11. CHECK	K APPROPRIATE BOXES TO INDIC	CATE N	ATURE OF NOTICE, REPOR	RT, OR OTHER DATA
TYPE OF SUBMISSION			TYPE OF ACTION	
	ACIDIZE		ALTER CASING	CASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	□ c	CHANGE TUBING	CHANGE WELL NAME
Approximate date work will start.	CHANGE WELL STATUS		COMMINGLE PRODUCING FORMATIONS	CONVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ F	RACTURE TREAT	NEW CONSTRUCTION
	OPERATOR CHANGE		PLUG AND ABANDON	PLUG BACK
	PRODUCTION START OR RESUME		RECLAMATION OF WELL SITE	RECOMPLETE DIFFERENT FORMATION
SPUD REPORT Date of Spud:				
	REPERFORATE CURRENT FORMATION		SIDETRACK TO REPAIR WELL	L TEMPORARY ABANDON
✓ DRILLING REPORT	L TUBING REPAIR	□ v	ENT OR FLARE	☐ WATER DISPOSAL
Report Date: 1/3/2013	WATER SHUTOFF	∟ s	SI TA STATUS EXTENSION	APD EXTENSION
1/3/2013	WILDCAT WELL DETERMINATION		OTHER	OTHER:
No Activity for the	completed operations. Clearly shone month of December 20	12. W	ell TD at 10,550	Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY January 03, 2013
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NU</b> 720 929-6857	WBER	TITLE Regulatory Analyst II	
SIGNATURE N/A			<b>DATE</b> 1/3/2013	

Sundry Number: 34127 API Well Number: 43047522550000

	STATE OF UTAH				FORM 9
ı	DEPARTMENT OF NATURAL RESOUR DIVISION OF OIL, GAS, AND MI			5.LEASE DE ML 22265	ESIGNATION AND SERIAL NUMBER
SUNDR	RY NOTICES AND REPORTS	WELLS	6. IF INDIAN	N, ALLOTTEE OR TRIBE NAME:	
	posals to drill new wells, significantly reenter plugged wells, or to drill horiz n for such proposals.			7.UNIT or C	A AGREEMENT NAME:
1. TYPE OF WELL Gas Well					ME and NUMBER: STATE 921-36J1CS
2. NAME OF OPERATOR: KERR-MCGEE OIL & GAS ON	ISHORE, L.P.			9. API NUME 43047522	
3. ADDRESS OF OPERATOR: P.O. Box 173779 1099 18th	h Street, Suite 600, Denver, CO, 802		<b>NE NUMBER:</b> 9 720 929-6	9. FIELD an 5NATUERAL	d POOL or WILDCAT: BUTTES
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2118 FSL 1784 FEL				COUNTY: UINTAH	
QTR/QTR, SECTION, TOWNSH	HIP, RANGE, MERIDIAN: 36 Township: 09.0S Range: 21.0E Mer	ridian: S	5	STATE: UTAH	
11. CHECI	K APPROPRIATE BOXES TO INDICA	ATE NA	ATURE OF NOTICE, REPOR	T, OR OTH	HER DATA
TYPE OF SUBMISSION			TYPE OF ACTION		
	ACIDIZE	Па	LTER CASING	CA	ASING REPAIR
NOTICE OF INTENT Approximate date work will start:	CHANGE TO PREVIOUS PLANS	С	HANGE TUBING	Сн	HANGE WELL NAME
	CHANGE WELL STATUS	□ c	OMMINGLE PRODUCING FORMATIONS	□ cc	DNVERT WELL TYPE
SUBSEQUENT REPORT Date of Work Completion:	DEEPEN	☐ FF	RACTURE TREAT	□ NE	EW CONSTRUCTION
	OPERATOR CHANGE	□ рі	LUG AND ABANDON	☐ PL	UG BACK
SPUD REPORT	✓ PRODUCTION START OR RESUME	□ R	ECLAMATION OF WELL SITE	☐ RE	COMPLETE DIFFERENT FORMATION
Date of Spud:	REPERFORATE CURRENT FORMATION	□ sı	IDETRACK TO REPAIR WELL	□ те	MPORARY ABANDON
	TUBING REPAIR		ENT OR FLARE		ATER DISPOSAL
✓ DRILLING REPORT Report Date:	WATER SHUTOFF		TA STATUS EXTENSION		PD EXTENSION
1/23/2013	_		TA STATUS EXTENSION		DEXTENSION
	WILDCAT WELL DETERMINATION		THER	OTHER:	
The subject wel	COMPLETED OPERATIONS. Clearly show I was placed on production I History will be submitted very report.	n on (	01/23/2013. The	Ac Ut Oil, FOR	cepted by the rah Division of Gas and Mining RECORD ONLY nuary 25, 2013
NAME (PLEASE PRINT) Lindsey Frazier	<b>PHONE NUM</b> 720 929-6857	IBER	TITLE Regulatory Analyst II		
SIGNATURE N/A			<b>DATE</b> 1/25/2013		

#### STATE OF UTAH

AMENDED REPORT	FORM 8
(highlight changes)	
5. LEASE DESIGNATION AND SERIAL	NUMBER:

	DIVISION OF OIL, GAS AND MINING										EASE DE			ERIAL NUMBE	ER:
						<del>.</del>					ML 22		E OD TO	DE MANE	
	L COMPLI	ETION	OR R	ECOMF	LETIC	N RI	EPOF	RT AND	LOG	6. 16	- INDIAN,	ALLOTTE	= OR TRI	BE NAME	
1a. TYPE OF WELL:  OIL GAS WELL ORY OTHER  7. UNIT or CA AGREE										AGREEM	ENT NAM	IE			
b. TYPE OF WOR NEW WELL	K: HORIZ. LATS.	DEEP-	] R	E- NTRY	DIFF. RESVR.		ОТН	ER				ME and NU		921-36J	1CS
2. NAME OF OPER KERR MC	ATOR: CGEE OIL & (	GAS ON	SHOR	E, L.P.							РІ NUMB 43047	ER: '52255			
3. ADDRESS OF O		CITY <b>DE</b>	NVER	STA	те СО	ZIP 802	217		NUMBER:			POOL, O			
4. LOCATION OF V AT SURFACE:	VELL (FOOTAGES) NWSE 2118	FSL 17	84 FEL	S36, T99	S R21F			<del></del>	-	2.0				SHIP, RANGE	
	ICING INTERVAL RE						EL S36	6,T9S,R	21E	N	NSE	36	9S	21E S	
	TH: NWSE 22										COUNTY		1	3. STATE	JTAH
14. DATE SPUDDE 8/22/2012		E T.D. REAC 2/2012	HED:	16. DATE COM			ABANDON	ED	READY TO PRODUC		17. ELE	VATIONS (		, RT, GL):	
18. TOTAL DEPTH:	<sup>MD</sup> 10,550 ⊤VD 10,540		19. PLUG E	BACK T.D.: ME	10,516 10,506		20. IF I	MULTIPLE CO	OMPLETIONS, HOW	MANY? *		TH BRIDG	GE MD		
22. TYPE ELECTRI	C AND OTHER MEC	Manager V Sect. 10	GS RUN (S		100 7.8 70 70 70 7	<u> </u>		23.					172	<u> 11 jajani hi</u>	
BHV-SD/DS	SN/ACTR-CB	L/GR/C	CL/TEN	ΜP				WAS DST	L CORED? RUN? NAL SURVEY?	NO NO NO	<u></u>	YES T	(Subr	nit analysis) nit report) nit copy)	
24. CASING AND L	INER RECORD (Rep	ort all string	s set in wel	II)				DI. 120110	, with contract :	110	Ш	120 0	(Gubi	ти сору)	
HOLE SIZE	SIZE/GRADE	WEIGHT	(#/ft.)	TOP (MD)	вотто	M (MD)		EMENTER EPTH	CEMENT TYPE & NO. OF SACKS	SLUI VOLUM		CEMEN	T TOP **	AMOUNT	PULLED
20"	14" STL	36.	7#	0	4	0			28						
11"	8 5/8" IJ-55	28	#	0	2,6	375			686				0	1	
7 7/8"	4 1/2" P-110	11.0	6#	0	10,	540			2,255			12	294		
								***							
25. TUBING RECO															
2 3/8"	DEPTH SET (M	D) PACK	ER SET (M	D) S	IZE	DEPTH	SET (MD)	PACKE	R SET (MD)	SIZE	]	DEPTH SE	Γ (MD)	PACKER SI	ET (MD)
26. PRODUCING IN	10,003														
FORMATION		OP (MD)	BOTTON	4 (MD) TO	OP (TVD)	BOTTO	M (TVD)		RATION RECORD	SIZE	NO. HO	ES I	DEDEOL	RATION STAT	116
(A) MESAVE		7,330	10,3		(,,,,,		( ,	7,330	10,370	0.36	23		F 21	Squeezed	7
(B)		.,	1,4,5					,000		0.00	20	Ope	=	Squeezed	╤
(C)					••			SA TA TA				Ope	==	Squeezed	<del>-</del>
(D)				<u> </u>				<u> </u>				Ope		Squeezed	
	RE, TREATMENT, C	EMENT SQU	EEZE, ETC					<u> </u>	<u> </u>					EIVED	
DEPTH	INTERVAL						AM	T DNA TNUC	YPE OF MATERIAL						
7330-10370	)	PUN	ЛР 14,4	190 BBLS	SLICK	H2O 8	305.8	322 LBS	30/50 OTTA	WA SA	AND	F	EB 2	7 2013	
			STAGE	************										SAS & MINI	
29. ENCLOSED AT	TACHMENTS:			****										L STATUS:	
	TRICAL/MECHANICA		CEMENT	VERIFICATION	$\equiv$	GEOLOG CORE AN	IC REPOR IALYSIS		DST REPORT	DIREC	TIONAL	SURVEY		PROD	)
													i		

INITIAL	

#### INTERVAL A (As shown in item #26)

1/23/2013		2/1/2013		HOURS TESTED	): 2 <b>4</b>	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF: 1,791	WATER – BBL:	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,566	CSG. PRESS. 2,335	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF: 1,791	WATER - BBL:	INTERVAL STATUS: PROD
				INT	ERVAL B (As sho	wn in item #26)				•
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	);	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:
				INT	ERVAL C (As sho	wn in item #26)	·		<del>_</del>	
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	D;	TEST PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – BBL:	INTERVAL STATUS:
				INT	ERVAL D (As sho	wn in item #26)	<del></del>			<u> </u>
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	);	TEST PRODUCTION RATES; →	OIL ~ BBL:	GAS MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:
32. DISPOSITION SOLD	ON OF GAS (Sold,	Used for Fuel, Ve	ented, Etc.)	<b>!</b>	<b></b>	•				
		IES (Include Aquit	•	als and all drill-stem	n tests, including de		I. FORMATION	(Log) MARKERS:		-

tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1,375 1,673 2,169 4,654 7,320

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/2" bit. The remainder of surface hole was drilled with an 11" bit. DQX P-110 csg was run from surface to 5061'; LTC P-110 csg was run from 5061' to 10,540'. Attached is the chronological well history, perforation report & final survey.

86.	I hereby certify that the foregoing and attache	nformation is complete and correct as determined from all available records.
-----	---	--

NAME (PLEASE PRINT) LINDSEY FRAZIER

REGULATORY ANALYST

SIGNATURE

2/22/2013

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- · recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

## US ROCKIES REGION

200				2000 1155 164 - 154	Opera	tion S	umma	ry Report	
Well: MORGAN S	TATE 9	21-36J1CS G	REEN				annamity years to the	Spud Date: 9/9/	2012
Project: UTAH-UINTAH Site: MOR						ATE 921-	36J PAD		Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING Start Date						12			End Date: 10/4/2012
Active Datum: RK Level)	79.00usft (ab	ove Mean S	iea	UWI: NV	V/SE/0/9/	S/21/E/3	6/0/0/26/PM/S/211	8/E/0/1784/0/0	
Date	St	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	"MD From (usft)	Operation
9/9/2012		- 2:30	1.00	MIRU	01	В	Р		M.S. 921-36J1CS (WELL 4 OF 4) INSTALL DIVERTER HEAD AND BUOY LINE. RIG UP NOV. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PUMP. PRIME PUMP. INSPECT RIG. SAFETY MEETING
27 %	2:30	- 3:00	0.50	DRLSUR	06	Α	Р		PICK UP #1 BHA
	3:00 4:30	- 4:30 - 6:30	2.00	DRLSUR	02	D	P		DRL F/44' - T/210' (166' @ 110.6' ROP) W.O.B. 5-15K  RPM = 45 POWERHEAD / 83 MUD MOTOR  UP/DWN/ROT = 22/20/20 2K DRAG  PSI ON/OFF = 600/400  M.W. 8.5# VIS 27  491 GPM PUMP RATE / NO AIR  TORQUE ON/OFF = 3000/900  NOV-ONLINE  HOLE CONDITION = GOOD
				DRLSUR	06	A	P -		TOOH WITH #1 BHA / TIH WITH #2 BHA
	6:30	- 7:00	0.50	DRLSUR	02	D	P		DRL F/210' - T/240'
	7:00	- 9:30	2.50	DRLSUR	80	В	Z		***REPLACE WASH TUBE AND PACKING ON
	9:30	- 16:00	6.50	DRLSUR	02	D	P		POWERHEAD  DRL F/240' - T/1210' ( 970' @ 149' ROP ) W.O.B. = 18/20K  RPM = 45 POWERHEAD / 83 MUD MOTOR  UP/DWN/ROT = 55/40/45 10K DRAG  PSI ON/OFF = 1050/850  M.W. 8.5# VIS 27  491 GPM PUMP RATE / NO AIR  TORQUE ON/OFF = 3000/1000  NOV-ONLINE  HOLE CONDITION = GOOD 6' HIGH 2' RIGHT OF LINE  SLID 147' / 10.8%
	16:00	- 0:00	8.00	DRLSUR	02	D	P		DRL F/1210' - T/ 2110' (900' @ 112.5' ROP) W.O.B. = 18/20K RPM = 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT = 70/58/63 7K DRAG PSI ON/OFF = 1360/1130
					<u>.i.</u>				M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF = 3000/1300 NOV-ONLINE HOLE CONDITION = GOOD 3.5' HIGH 1.5' RIGHT OF LINE SLID 197' / 9%

### US ROCKIES REGION =

## Dperation Summary Report

Well: MORGAN S	TATE	121-36 1100	GREEN			9. <b>m</b> . (1)		Spud Date: 9/9/20	112
Well: MORGAN STATE 921-36J1CS GREEN Project: UTAH-UINTAH Site: MOI						ATE 024		Spud Date: 9/9/20	
							T PAD		Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING Active Datum: RK		70 00uaft (at	- Moon Co	Start Date			SIONIE IOSI	0/0/26/PM/S/2118/	End Date: 10/4/2012
Level)	. മ ധ്രാ, വ	79.00usit (at	oove Mean Se	ed .	OVVI. 14V	V/OE/U/S/C	3/2 1/ =/30/	0/0/20/FIVI/3/21 10/	E/0/1/84/0/0
Date	ú.Ar.	Time 1. *, :	Duration	Phase	Code	Sub 🖈	P/U 🔐	-MD From	Operation
直 1736年數		art-End	(hr)	74 <b>2</b> (1)		C 200 3 3 C		(usft)	
9/10/2012	0:00	- 6:30	6.50	DRLSUR	02	Ď	P		DRL F/2110' - T/ 2683' (573' @ 88.2 ROP ) W.O.B.
									= 18/20K
									RPM = 45 POWERHEAD / 83 MUD MOTOR JP/DWN/ROT = 77/62/69
									PSI ON/OFF = 1600/1400
									M.W. 8.5# VIS 27
									191 GPM PUMP RATE / NO AIR
									FORQUE ON/OFF = 3200/1500 NOV-ONLINE
4									HOLE CONDITION = PARTIAL RETURNS
									I' HIGH .75' RIGHT OF LINE
	6:30	- 8:30	2.00	DRLSUR	05	C	P		SLID 270' / 10% CIRCULATE FOR CASING
	8:30	- 12:30	4.00	DRLSUR	06	Α.	P		
A 2 11			,,,,,	21120011		•	•		LDDS, BHA & DIRECTIONAL TOOLS ( SPOT MUD @ 1700' AND AT COLLARS )
·	12:30	- 13:30	1.00	DRLSUR	12	Α	Р		MOVE PIPE RACKS AND CATWALK. PULL
									DIVERTER HEAD. RIG UP TO RUN CSG. MOVE CSG
									NTO POSITION TO P/U. LOAD TRUCKS WITH DRILL
. *	13:30	- 16:30	3.00	DRLSUR	12	С	P		PIPE FOR INSPECTION.  TIH 60 JOINTS 8 5/8", 28#, J55 CASING SHOE IS AT
									2649.6' BAFFLE IS AT 2605.4'
	16:30	- 17:00	0.50	DRLSUR	12	В	P	ŀ	HOLD SAFETY MEETING PUMP ON CASING RUN
									200' OF 1". RIG DOWN RIG MOVE OFF WELL, RIG
	17:00	- 18:00	1.00	CSGSUR	12	Ē	P		JP CEMENT TRUCKS, AND CEMENT HEAD.
1 2 2		10.00	1.00	OCCOON	12	la.	•		RIG UP PRO PETRO PUMP TRUCK , LOAD PLUG TEST LINES TO 2000 PSI. PUMP 155 BBLS WATER
									OLLOWED BY 20 BBLS GEL WATER FLUSH
									FOLLOWED BY LEAD = 280SX CLASS G CMT @
No.									12# 2.86 YIELD. FOLLOWED BY 166SX 15.8# 1.15 YIELD. DROP PLUG & DISPLACE W/ 162.6 BBLS
									WATER. PLUG DOWN @ 17:27 09/10/2012 BUMP
								F	PLUG @ 900 PSI - FINAL LIFT = 700 PSI. FLOAT
·									DIDN'T HOLD. SHUT IN UNDER PRESSURE, FULL
									RETURNS THROUGH OUT JÖB, PUMP 150 SX 15.8# CMT W/4% CALCIUM DOWN 1", 30BBLS CEMENT TO
									SURFACE. CEMENT FELL BACK
	19:00	- 19:00	0.00	CSGSUR	12	Е	Р		NOC, PUMP TOP OUT #2 W/ 90SX CLASS G CMT @
									15.8 WT & 1.15 YIELD + 4% CACL / CMT TO
9/27/2012	8:30	- 10:00	1.50	MIRU3	01	Ċ	P		SURFACE, RELEASE RIG @ 19:00 SKID RIG 20' TO MS 921-36J1CS,ALIGN OVER WELL
	10:00	- 12:00	2.00	PRPSPD	14	A	P		NIPPLE UP BOPE,RIG UP AFTER SKID
	12:00	- 17:00	5.00	PRPSPD	15	Α	Р		PRESSURE TEST CASING 1,500 HIGH 250 LOW
									FOR 30 MIN / PRESSURE TEST H&P EQUIP BLIND
									RAMS, PIPE RAMS, FLOOR VALVE, KILL LINES &
									KILL LINE VALVES, BOP WING VALVES , HCR VALVE + CHOKE LINE; INNER AND OUTER CHOKE
									VALVES & MANIFOLD TO 250 PSI LOW @ 5
									MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST
									ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2,500 PSI HIGH
	17:00	- 17:30	0.50	PRPSPD	14	В	Р		NSTALL WEAR BUSHING & SMITH BEARING ASSY
		- 18:30	1.00	PRPSPD	15	Α	Р		TEST MI SWACO PRESSURE CONTROL EQUIPMENT
									TO 1,000 PSI

2/6/2013 4:33:36PM

#### US ROCKIES REGION ...

## Operation Summary Report

Well: MORGAN STATE 921-36J1CS GREEN	Spud Date: 9/9/2012					
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36J PAD	Rig Name No: PROPETRO 11/11, H&P 298/298				
Event: DRILLING	Start Date: 8/16/2012	End Date: 10/4/2012				
Active Datum: RKB @5,079.00usft (above Mean	n Sea UWI: NW/SE/0/9/S/21/E/36/0/	0/26/PM/S/2118/E/0/1784/0/0				
Level)						

Pube	Active Datum: RKB @5,079.00usft (above Mean Sea Level)					UWI: NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0				
18:30 - 21:00	€ E CDate	Št	art-End 😅			Code	TO CALCUTE COME IN	P/U	The second secon	Operation
21:00 - 22:00   1.00		18:30	- 21:00	2.50	PRPSPD	06	Α	P		WEATHERFORD SCRIBE , ORIENTATE, TEST SAME
22:00 - 23:00 1.00 DRLPRC 02 F P  DRILL CEMENT 8. SHOE TRACK FROM 2,575' BAFFLE@_2,2505 SHOE@_2,270 RAT HOLE TO 2,705' PPH  WOB 18,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 107 PUMPF 310 SPM- 495 CPM PUMP PRESSURE ONOFF BTM 1,650/H,400 TORQUE ONOFF BTM 6,000' 2,000 PICK UP WT 104,000 SLOCK OFF WT 88,000 ROT WT 98,000 SUDE 165' IN 165 MIN 14.4 % OF FOOTAGE DRILLED, 28.9 % OF HIS DRILLED 0 BBLS THUID LOST MUD WT 8.4 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND, W/ 3-4% SAWDUST NOV-D WATER SWGAOO OF LINE WOB 18,000-24,000 TOP DRIVE RPM 40-75 MUD WT 8.4 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND, W/ 3-4% SAWDUST NOV-D WATER SWGAOO OF LINE DRILL /SLIDE / SURVEY/ F/ 2,805-3,825 = 820' @ 13.6 FPH WOB 18,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 90 PUMPS 12.4 SPM- 5-58 OPM PUMP PRESSURE ONOFF BTM 1,800/1,525 TORQUE ONO				1.00	PRPSPD	07	В	Р		LEVEL DERRICK, INSTALL ROTATING HEAD, PRE
23:00 - 0:00 1.00 DRLPRC 02 B P  DRILL /SLIDE / SURVEY/ F / 2,705-2,805 = 100' @100 FPH  WW0 18,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 117 PLIMPS 110 SPM 495 GPM PUMP PRESSURE ON/OFF BTM 1,850//1,400 TORQUE ON/OFF BTM 6,000/ 2,000 PICK UP WT 104,000 SLIACK OFF WT 88,000 ROT WT 85,000 SLIDE IS IN 168 IN 144.4% OF FOOTAGE DRILLED, 28,9 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 104,000 SLIDE IS IN 168 IN 148 MIN 14.4% OF FOOTAGE DRILLED, 28,9 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 84.VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% SAWDUST NOV-D WATER SWACO OFF LINE  9/28/2012 0:00 - 6:00 6.00 DRLPRC 02 B P  PICK UP WT 104,000 SLIDE / SURVEY/ F / 2,805-3,825 = 820' @13-6.6 FPH WW0 18,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 90 PUMPS 124 SYM-558 GPM PUMP PRESSURE ON/OFF BTM 1800//1,525 TORQUE ON/OFF BTM 8,000/ 4,000 PICK UP WT 130,000 SLACK OFF WT 120,000 ROT WT 105,000 SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED, 9,7 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 84-VIS 27,	Jan 1	22:00	- 23:00	1.00	DRLPRC	02	F	P		DRILL CEMENT & SHOE TRACK FROM 2,575'
DRILL   SURVEY   7   2,705-2,905 = 100 @   100 @   100   1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									
@136.6 FPH  WOB 18,000-24,000  TOP DRIVE RPM 40-75  MUD MOTOR RPM 90  PUMPS 124 SPM= 558 GPM  PUMP PRESSURE ON/OFF BTM 1800//1,525  TORQUE ON/OFF BTM 8,000/ 4,000  PICK UP WT 130,000  SLACK OFF WT 120,000  ROT WT 105,000  SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED, 9.7 %OF HRS DRILLED  0 BBLS FLUID LOST  MUD WT 8.4 VIS 27,										FPH WOB 18,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 117 PUMPS 110 SPM= 495 GPM PUMP PRESSURE ON/OFF BTM 1,650//1,400 TORQUE ON/OFF BTM 6,000/ 2,000 PICK UP WT 104,000 SLACK OFF WT 88,000 ROT WT 95,000 SLIDE 165' IN 165 MIN 14.4 % OF FOOTAGE DRILLED, 28.9 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 8.4 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% SAWDUST NOV-D WATER
MUD MOTOR RPM 90 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 1800//1,525 TORQUE ON/OFF BTM 8,000/ 4,000 PICK UP WT 130,000 SLACK OFF WT 120,000 ROT WT 105,000 SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED, 9.7 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 8.4 VIS 27,	9/28/2012	0.00	- 6:00	6,00	DRLPRC	. 02	В	Р		@136.6 FPH WOB 18,000-24,000
PICK UP WT 130,000 SLACK OFF WT 120,000 ROT WT 105,000 SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED, 9.7 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 8.4 VIS 27,	·								· .	MUD MOTOR RPM 90 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 1800//1,525
ROT WT 105,000 SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED, 9.7 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 8.4 VIS 27,										PICK UP WT 130,000
SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED, 9.7 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 8.4 VIS 27,										
MUD WT 8.4 VIS 27,	·									SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED,
3-4% SAWDUST										PUMPING 5-10 BBL SWEEPS EVERY STAND,W/
NOV-D WATER SWACO OFF LINE	<u>'</u>									NOV-D WATER

2/6/2013 4:33:36PM

Well: MORGAN STATE 921-36J1CS	GREEN	consecutive contraction	CONTRACTOR OF STATE		Spud Date: 9/	/9/2012	
Project: UTAH-UINTAH	·	Site: MOR	CAN ST	ATE 021 3	· · · · · · · · · · · · · · · · · · ·		
			RGAN STATE 921-36J PAD			Rig Name No: PROPETRO 11/11, H&P 298/298	
Event: DRILLING			: 8/16/2012			End Date: 10/4/2012	
Active Datum: RKB @5,079,00usft (a Level)	bove Mean Sea		UWI: NV	N/SE/0/9/S	S/21/E/36/0/0/26/PM/S/2	2118/E/0/1784/0/0	
A V.	drugara, an albasi.	1222	**************************************	304.000 NO 10			
Date Time	Duration F	hase .	Code	Sub Code	P/U MD From (usft)	Operation P	
6:00 - 13:00		RLPRV	02	B	P	DRILL /SLIDE / SURVEY/ F/ 3,625-4,702 = 1077"	
						@153.8	
						WOB 18,000-24,000	
						TOP DRIVE RPM 40-75	
						MUD MOTOR RPM 90	
						PUMPS 124 SPM= 558 GPM	
						PUMP PRESSURE ON/OFF BTM 2,000//1730	
						TORQUE ON/OFF BTM 8,000/ 6,000	
						PICK UP WT 138,000	
						SLACK OFF WT 100,000	
						ROT WT 124,000	
						SLÍDE 28' IN 25 MIN 2.8 % OF FOOTAGE DRILLED,	
						.5.9 %OF HRS DRILLED	
						100 BBLS FLUID LOST	
						MUD WT 8.5 VIS 27,	
						PUMPING 5-10 BBL 9.5# SWEEPS EVERY STAND,W	
						ANCO FIBER ,CALCIUM CARBONATE,MAXI SEAL	
						,SAWDUST LCM 4-5%	
						NOV-D WATER	
13:00 - 14:30	1.50 DF	RLPRV	06	J	Р	SWACO OFF LINE	
74.00	1.50	(LI IV	00	J	r	TRIP OUT TO 1,960" TO PICK UP GHOST REAMER /	
14:30 - 15:00	0.50 DF	RLPRV	07	Α	Р	HOLE GOOD DAILY RIG SERVICE	
15:00 - 16:00		RLPRV	06	J	Р		
16:00 - 0:00						TRIP IN HOLE, WASH 85' TO BTM , NO FILL	
10.00 - 0,00	8.00 DF	RLPRV	02	В	P	DRILL /SLIDE / SURVEY/ F/ 4,702-5,820 = 1,118"	
						@139.75	
						WOB 18,000-24,000	
						TOP DRIVE RPM 40-75	
						MUD MOTOR RPM 90	
						PUMPS 124 SPM= 558 GPM	
						PUMP PRESSURE ON/OFF BTM 2,225/1,970	
						TORQUE ON/OFF BTM 10,000/ 6,000 PICK UP WT 160,000	
						SLACK OFF WT 122,000	
						ROT WT 140,000	
						SLIDE 20' IN 15 MIN 1.8 % OF FOOTAGE DRILLED, .3	
						%OF HRS DRILLED	
						75 BBLS FLUID LOST	
						MUD WT 8.5 VIS 27,	
						PUMPING 5-10 BBL 9.5# SWEEPS EVERY STAND,W/	
						ANCO FIBER ,CALCIUM CARBONATE,MAXI SEAL	
						,SAWDUST LCM 4-5%	
						NOV-D WATER	
						SWACO OFF LINE	

2/6/2013

4:33:36PM

Well: MORGAN	STATE 9	21-36J1CS	GREEN			Spud Date: 9/9/2012					
Project: UTAH-	UINTAH			Site: MOI	RGAN ST	ATE 921	-36J PAE		Rig Name No: PROPETRO 11/11, H&P 298/298		
Event: DRILLIN	1G			Start Date	e: 8/16/20	 012			End Date: 10/4/2012		
Active Datum:	RKB @5,0	79.00usft (a	bove Mean S		r —		/S/21/E/3	6/0/0/26/PM/S/2	2118/E/0/1784/0/0		
Level)		_									
Date	St	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation (1)		
9/29/2012	0:00	- 6:00	6.00	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 5,820-6,505 = 685' @114		
									FPH		
									WOB 20,000-24,000		
									TOP DRIVE RPM 50-75		
									MUD MOTOR RPM 90		
									PUMPS 124 SPM= 558 GPM		
									PUMP PRESSURE ON/OFF BTM 2,275//1,975		
									TORQUE ON/OFF BTM 11,000/ 7,000		
									PICK UP WT 178,000		
		1							SLACK OFF WT 130,000		
									ROT WT 152,000		
									SLIDE 20' IN 30 MIN 2.9 % OF FOOTAGE DRILLED,		
									8.3 %OF HRS DRILLED		
									60 BBLS FLUID LOST WHILE DRILLING		
									MUD WT 8.5 VIS 27,		
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/		
									ANCO FIBER, MAXI SEAL		
									CALCIUM CARB, SAWDUST 4-5%		
									NOV-D WATER		
	6:00	- 14:20	0.50	יים ספויי	00	-	Б		SWACO OFF LINE		
	0.00	- 14:30	8.50	DRLPRV	02	В	Р		DRILL /SLIDE / SURVEY/ F/ 6,505-7,261 = 756 @88.9 FPH		
									WOB 20,000-28,000		
									TOP DRIVE RPM 40-75		
									MUD MOTOR RPM 85		
									PUMPS 118 SPM= 531 GPM		
									PUMP PRESSURE ON/OFF BTM 2,050//1,880		
									TORQUE ON/OFF BTM 9,000/ 7,000		
									PICK UP WT 190,000		
									SLACK OFF WT 148,000		
									ROT WT 164,000		
									SLIDE 15' IN 30 MIN .2 % OF FOOTAGE DRILLED, 5.8		
									%OF HRS DRILLED		
									130 BBLS FLUID LOST WHILE DRILLING		
									MUD WT 8.5 VIS 27,		
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/		
									ANCO FIBER,MAXI SEAL		
									CALCIUM CARB, SAWDUST 4-5%		
									NOV-D WATER		
									SWACO OFF LINE		
	44:00		4				_		LIGHT MUD UP @7,250'		
	14:30	- 15:00	0.50	DRLPRV	07	Α	P		DAILY RIG SERVICE		

Well: MORGAN	STATE 921-3	36J1CS GI	REEN		Spud Date: 9/9/2012							
Project: UTAH-U	HATMIL			Site: MOF	RGAN ST	ATE 921	-36J PAD		Rig Name No: PROPETRO 11/11, H&P 298/298			
Event: DRILLING	3			Start Date	e: 8/16/2012				End Date: 10/4/2012			
Active Datum: R Level)	KB @5,079.0	Ousft (abo	ve Mean S	1			/S/21/E/36	/0/0/26/PM/S/211				
Date	Time Start-E		Duration (	Phase	Code	Sub	P/U	MD From	Operation			
#T# 15 15 15 15 15 15 15 15 15 15 15 15 15	ALL DESCRIPTION OF PROPERTY	0:00	9.00	DRLPRV	02	B		(usft)	DRILL /SLIDE / SURVEY/ F/ 7,261-8,000 = 739			
									@82.1 FPH			
									WOB 20,000-28,000			
									TOP DRIVE RPM 40-75			
									MUD MOTOR RPM 85			
									PUMPS 120 SPM= 550 GPM			
									PUMP PRESSURE ON/OFF BTM 2,450//2,225			
									TORQUE ON/OFF BTM 12,000/ 9,000			
									PICK UP WT 206,000			
									SLACK ÖFF WT 148,000			
									ROT WT 173,000			
									SLIDE 10' IN 15 MIN .2 % OF FOOTAGE DRILLED, 5.8			
									%OF HRS DRILLED			
									15 BBLS FLUID LOST WHILE DRILLING			
									MUD WT 8.8 VIS 34			
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/			
									ANCO FIBER, MAXI SEAL			
									CALCIUM CARB, SAWDUST 4-5%			
									NOV-D WATER			
									SWACO OFF LINE			
									NO FLARE			
9/30/2012	0:00 -	6:00	6.00	DRLPRV	02	В	Р		DRILL / SURVEY/ F/ 8,000-8,475= 475' @79.1 FPH			
									WOB 20,000-28,000			
									TOP DRIVE RPM 40-75			
									MUD MOTOR RPM -85-90			
									PUMPS 120 SPM= 540 GPM			
									PUMP PRESSURE ON/OFF BTM 2,400//2,125			
									TORQUE ON/OFF BTM 12,000/ 9,000			
									PICK UP WT 210,000			
									SLACK OFF WT 160,000			
									ROT WT 180,000			
									NO SLIDES			
									42 BBLS FLUID LOST WHILE DRILLING			
									MUD WT 8.8 VIS 34,			
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ ANCO FIBER.MAXI SEAL			
									•			
									CALCIUM CARB,3-4% SAWDUST NOV-D WATER			
									SWACO OFF LINE			

2/6/2013 4:33:36PM

## Operation Summary Report

	STATE 921-36J1CS G			E period or design	No. 100 11 100		Spud Date: 9/9/2	012			
Project: UTAH-UI	NTAH		Site: MOR	RGAN STA	ATE 921-	36J PAD		Rig Name No: PROPETRO 11/11, H&P 298/298			
Event: DRILLING			Start Date	: 8/16/20	12			End Date: 10/4/2012			
	B @5,079.00usft (abo	ove Mean Sea	3	UWI: NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0							
Level)				Direction of the second							
Date	Time Start-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation			
	6:00 - 14:30 14:30 - 15:00		DRLPRV	02	В	P		DRILL /SLIDE / SURVEY/ F/ 8,475-9,056= 581' @68.3 FPH WOB 20,000-28,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM -85-90 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2,575//2,310 TORQUE ON/OFF BTM 12,000/ 10,000 PICK UP WT 223,000 SLACK OFF WT 173,000 ROT WT 191,000 SLIDE 15' IN 30 MIN .2.5 % OF FOOTAGE DRILLED, 5.8 %OF HRS DRILLED 0 BBLS FLUID LOST WHILE DRILLING MUD WT 8.9 VIS 34, PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ ANCO FIBER,MAXI SEAL CALCIUM CARB,3-4% SAWDUST NOV-D WATER SWACO OFF LINE 5-10' FLARE			
	15:00 - 0:00		DRLPRV	02	В	P		DAILY RIG SERVICE  DRILL / SURVEY/ F/ 9,056-9,615=559" @62.1 FPH  WOB 20,000-28,000  TOP DRIVE RPM 40-75  MUD MOTOR RPM -85-90  PUMPS 110 SPM= 495 GPM  PUMP PRESSURE ON/OFF BTM 2,350//2,075  TORQUE ON/OFF BTM 12,000/ 10,000  PICK UP WT 238,000  SLACK OFF WT 172,000  ROT WT 201,000  NO SLIDES  0 BBLS FLUID LOST WHILE DRILLING  MUD WT 8.9 VIS 34,  PUMPING 5-10 BBL SWEEPS EVERY STAND,W/  ANCO FIBER,MAXI SEAL  CALCIUM CARB,3-4% SAWDUST  NOV-CONTENTIONAL  SWACO ON LINE 9,433 ANN PRESSURE 157 10-15'  FLARE			

### ∷ Operation Summary Report

ers to the second section		Opera	tion Si	ummary Report					
Well: MORGAN STATE 921-36J1CS GREEN				2012					
Project: UTAH-UINTAH	Site: MOF	RGAN STA	ATE 921-3	B6J PAD	Rig Name No: PROPETRO 11/11, H&P 298/298				
Event: DRILLING	Start Date	e: 8/16/20°	End Date: 10/4/2012						
Active Datum: RKB @5,079.00usft (above Mean Sea		UWI: NV	UWI: NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0						
Level)									
Date Time Duration Start-End (hr)	Phase	Code	Sub Code	P/U MD From	Operation				
10/1/2012 0:00 - 6:00 6.00	DRLPRV	02	В	Р	DRILL / SURVEY/ F/ 9,615-9,850= 235' @39.1 FPH				
					WOB 20,000-30,000				
					TOP DRIVE RPM 40-75 MUD MOTOR RPM -80				
					PUMPS 110 SPM=495 GPM				
					PUMP PRESSURE ON/OFF BTM 2,525//2,370				
					TORQUE ON/OFF BTM 12,000/ 10,000				
					PICK UP WT 226,000				
					SLACK OFF WT 174,000				
					ROT WT 200,000				
					NO SLIDES				
					0 BBLS FLUID LOST WHILE DRILLING MUD WT 8.9 VIS 34,				
					PUMPING 5-10 BBL SWEEPS EVERY STAND.W/				
					ANCO FIBER,MAXI SEAL				
					CALCIUM CARB,3-4% SAWDUST				
					NOV- CONVENTIONAL				
					SWACO ON LINE ***WATER FLOW***-				
					WATER FLOW @ 9,650' ANN PRESSURE TO 400				
0.00					PSI,EQUIV MW 10.2				
6:00 - 18:00 12.00	DRLPRV	02	В	P	DRILL / SURVEY/ F/ 9,850-10,270=420 @35 FPH				
					WOB 20,000-30,000				
					TOP DRIVE RPM 40-75 MUD MOTOR RPM -80				
					PUMPS 105 SPM=472 GPM				
					PUMP PRESSURE ON/OFF BTM 2,700//2,500				
					TORQUE ON/OFF BTM 11,000/ 8,000				
					PICK UP WT 236,000				
					SLACK OFF WT 182,000				
1					ROT WT 208,000 NO SLIDES				
· · · · · · · · · · · · · · · · · · ·					0 BBLS FLUID LOST WHILE DRILLING				
					10,050 DISPLACE HOLE W/ 10.4 # MUD				
					MUD WT 11.0 VIS 38 LCM 3-4%,				
					NOV- OFF LINE				
18:00 - 18:30 0.50	DRLPRV	07	Α	P	SWACO OFF LINE DAILY RIG SERVICE				
	DRLPRV	02	В	Р	DRILL / SURVEY/ F/ 10,270-10,470=200 @35 FPH				
					WÖB 20,000-30,000				
					TOP DRIVE RPM 40-75				
					MUD MOTOR RPM -80				
					PUMPS 105 SPM=472 GPM				
					PUMP PRESSURE ON/OFF BTM 2,700//2,500 TORQUE ON/OFF BTM 10,000/ 9,000				
					PICK UP WT 234,000				
					SLACK OFF WT 182,000				
					ROT WT 205,000				
					NO SLIDES				
a y v					0 BBLS FLUID LOST WHILE DRILLING				
					MUD WT 11.3 VIS 38 3+4% LCM NOV- OFF LINE				
					SWACO OFF LINE				
					C. I. C. C. C. L. C.				

# Operation Summary Report

Well: MORGAN STATE 921-36J1CS GREEN		Spud Date: 9/9/2012					
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36J PAD	Rig Name No: PROPETRO 11/11, H&P 298/298					
Event: DRILLING	Start Date: 8/16/2012	End Date: 10/4/2012					
Active Datum: RKB @5,079.00usft (above Mean	Sea UWI: NW/SE/0/9/S/21/E/36/0/	UWI: NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0					
I evel\							

					: 8/16/2012				End Date: 10/4/2012		
Active Datum: F	RKB @5,0	079.00usft (a	bove Mean S	Sea	UWI: N	N/SE/0/9	9/S/21/E/36	/0/0/26/PM/S/2118/E/	18/E/0/1784/0/0		
Level)											
Date 😩	E WEET	Time i	Duration	T Phase	Code	Sub	- P/U ⊕	MD From	Operation : U.S. San Section :		
	A TOTAL STREET	tart-End	(hr)			Code		(usft)			
10/2/2012	0:00	- 2:00	2.00	DRLPRV	02	B	P		RILL/ SURVEY F/ 10,470-10,532= 62' @31 FPH		
						_	•		OB 20,000-30,000		
									DP DRIVE RPM 40-75		
									UD MOTOR RPM -80		
									JMPS 105 SPM=473 GPM		
									JMP PRESSURE ON/OFF BTM 2,525//2,370		
									DRQUE ON/OFF BTM 12,000/ 10,000		
								·	CK UP WT 234,000		
									ACK OFF WT 182.000		
									OT WT 208,000		
									O SLIDES		
									BBLS FLUID LOST SEEPAGE WHILE DRILLING		
								1.1	UD WT 11.3 VIS 37 LCM 4%,		
									OV- OFF LINE		
								SV	VACO OFF LINE		
								NČ	O FLARE		
	2:00	- 3:00	1.00	DRLPRV	22	М	Χ	LO	OST CIRC ,PUMP 15% LCM SWEEPS LOST 170		
									BLS CIRC W/ PARTICAL RETURNS LOST 120		
								BB	BLS BUILD VOL WORK PIPE, CIRC W/ FULL		
								RE	ETURNS MW 11.3 / 10% LCM *** LOST		
								CII	RCULATION ***		
*	3:00	- 3:30	0.50	DRLPRV	02	В	Р	DF	RILL F/ 10,532 TO 10,550 TD ,10 BBL MUD LOSS		
	3:30	- 5:30	2.00	DRLPRV	05	В	Р		CH F/ WIPER TRIP TO CASING SHOE / MUD WT TO		
								11.			
	5:30	- 5:30	0.00	DRLPRV							
	5:30	- 9:30	4.00	DRLPRV	06	Ε	P	TD	RIP OUT TO CASING SHOE PULLED 30,000 OVER		
						_	•		9,860, REST OF TRIP NO TIGHT SPOTS,HOLE		
									OOK PROPER FLUID, FLOW CHECK@ CASING		
									HOE		
	9:30	- 15:00	5.50	DRLPRV	06	E	P		RIP BACK IN HOLE, PRECAUTIONARY, WASH AND		
									EAM FROM 4,500TO 5,500,REAM THRU TIGHT		
									POTS 5,609-11,5,840-48 ,5,874-76, WASH 75' TO		
									TM 10' FILL		
	15:00	- 16:30	1.50	DRLPRV	05	С			CH F/ OPEN HOLE LOGS		
	16:30	- 19:30	3.00	DRLPRV	06	Ε	X		d WIPER TRIP 10 STANDS, UNABLE TO PUMP		
					- <b>-</b>	_			ROUGH DRILL STRING		
	19:30	- 0:00	4.50	DRLPRV	06	В	Р		RIP OUT OF HOLE ( WET) FOR OPEN HOLE		
						_	•		DGS,DISPLACE W/ 12.5# MUD		
10/3/2012	0:00	- 3:00	3.00	EVALPR	06	В	Р		· · · · · · · · · · · · · · · · · · ·		
		2.00	0.00	1 I	30	, u	•		OH FOR LOGS, DISPLACE W/ 12.5# MUD, FLOW		
									HECK @ CASING SHOE, LAY DOWN GHOST EAMER PULL BHA, FOUND EMITTER & MWD TOOL		
									ACKED OFF WITH CLAY BARITE & LCM FROM		
									PRIGHT TANK/ BREAK BIT L/D MUD MOTOR		
	3:00	- 9:00	6.00	EVALPR	11	G	Р		SM RIG UP HALLIBURTON RUN TRIPLE COMBO		
						-	•		DGGER TD 10,536, DRILLER TD 10,536, LOG OUT		
									SURFACE,RD DOWN		
	9:00	- 10:00	1.00	CSGPRO	14	B	P				
	16 A.	. 3.02		223,113			•		JLL SMITH BEARING ASSEMBLY,INSTALL CASING DTATING HEAD HOUSING,PULL WEAR		
									JISHING,X/O BAILS		
•	10:00	- 11:00	1.00	CSGPRO	12	Α	Р		FJSA RIG UP FRANKS CASING EQUIP		
L		. 1.00					'	C I	TION NO OF I TONING CAGING EQUIP		

2/6/2013

### Operation Summary Report

Well: MORGAN	STATE 9	21-36J1CS (	GREEN					Spud Date: 9/9/2012			
Project: UTAH-l	JINTAH			Site: MOF	RGAN ST	ATE 921	-36 <b>J</b> PAD	Rig Name No: PROPETRO 11/11, H&P 298/298			
Event: DRILLIN	G			Start Date	e: 8/16/20	12		End Date: 10/4/2012			
Active Datum: F Level)	RKB @5,0	79.00usft (at	ove Mean S	Sea	UWI: N\	UWI: NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0					
Date	St	Time art-End	Duration (hr)	Phase #	:Code	Sub Code	P/U	MD From Operation (usft)			
	11:00	- 19:30	8.50	CSGPRO	12	С	Р	MAKE UP FLOAT EQUIP,RIH TEST SAME,RUN 125 JTS I-80 11.6# LTC 4.5 CASING +1 CROSSOVER LTC/ DQX 115 JTS I-80 11.6# DQX 4.5 CASING+ RELATED TOOLS / BREAKING CIRCULATION @ SELECTED INTERVALS / LANDING CASING MANDREL IN BOWL W/ 110,000, @ 10,540 FOR CIRC & CEMENTING / SHOE @10,540 / FC @ 10,491 /BH MKR 9,958 MV MKR @ 7,319 X/0 @ 5,034 ,RD SAME			
	19:30	- 21:00	1,50	CSGPRŌ	05	D	P	CIRC CASING BTMS UP 15' FLARE RD FRANKS / CT-JSA WITH BJ			
		- 0:00	3.00	CSGPRO	12	E	P	INSTALL BJ CMT HEAD, TEST PUMP & LINES TO 5,000 PSI, ,DROP BOTTOM PLUG PUMP 25 BBLS FW PUMP 545 SKS LEAD CEMENT @ 12.5 PPG, (192 BBLS) (PREM LITE II + .0.25 pps CELLO FLAKE + .5 pps KOL SEAL + .05 lb/sx STATIC FREE + 6% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + 0.2 % R-3 +0.4%bwoc FL-52 .6% FRESH WATER / (10.44 gal/sx, 1.98 yield) + 1,710 SX TAIL @ 14.3 ppg(402 BBLS) + (CLS G 50/50 POZ + 10% SALT + .005llbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE +0.5%EC-1+ 58.9% FW / (5.94 gal/sx, 1.32 yield) WASH PUMP & LINES DROP TOP PLUG & DISPLACE W/ 163 BBLS H2O + ADDITIVES / PLUG DOWN @23:47 HOURS / FLOATS HELD W/ 2 BBLS H2O RETURNED TO INVENTORY/ / LIFT PRESSURE @ 2,977 PSI BUMP PRESSURE @3,614 / LOST RETURNS @ 155 BBLS IN DISPLACEMENT W/ 5 BBLS WATER SPACER TO SURFACE /TOP OF TAIL CEMENT CALCULATED @ 4,125' / RIG DOWN BJ			
10/4/2012	0:00	- 2:00	2.00	CSGPRO	12	E	P	FLUSH STACK / SET PACK OFF L/D SETTING TOOL, REMOVE CASING BAILS & ELEVATORS			
	2:00	- 3:30	1.50	RDMO	14	Α	Р	CT-JSA NIPPLE DOWN BOPE / PREP FOR SKID / RELEASE RIG TO MORGAN STATE 921-36G4CS@03:30 HRS 10/04/2012			

2/6/2013

### 1 General

### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

### 1.2 Well/Wellbore Information

Well	MORGAN STATE 921-36J1CS GREEN	Wellbore No.	ОН
Well Name	MORGAN STATE 921-36J1CS	Wellbore Name	MORGAN STATE 921-36J1CS
Report No.	1	Report Date	1/4/2013
Project	UTAH-UINTAH	Site	MORGAN STATE 921-36J PAD
Rig Name/No.		Event	COMPLETION
Start Date	1/4/2013	End Date	1/23/2013
Spud Date	9/9/2012	Active Datum	RKB @5,079.00usft (above Mean Sea Level)
UWI	NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0		

### 1.3 General

Contractor	Job Method	Supervisor	
Perforated Assembly	Conveyed Method		

1.5

Summary

### 1.4 Initial Conditions

Fluid Type		Fluid Density	Gross interval	7,330.0 (usft)-10,370.0 (us	Start Date/Time	12/31/2012 12:00AM
Surface Press		Estimate Res Press	No. of intervals	72	End Date/Time	12/31/2012 12:00AM
TVD Fluid Top		Fluid Head	Total Shots	231	Net Perforation Interval	77.00 (usft)
Hydrostatic Press		Press Difference	Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL				Final Press Date	

### 2 Intervals

#### 2.1 Perforated Interval

Date	Reservoir (usft)	CCL-Ti MD Top S (usft)	(usft)	Shot Density (shot/ft)	Misfires/j Diamete Add. Shot ri (in)	Ca	rr Type /Stage No.	Carri Size (in)	Phasing	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201	MESAVERDE/	7,330.0	7,331.0	3.00	0.36	0 EXP	,	3.375	120.00		23.00	PRODUCTIO	
2							-				and or a constant of the const	N	
12:00AM				de la							With the second		

Date	Formation/i Reservoir	CCL@ (usft)	CCL-Ti S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r: (in)	Carr Type /Stage No.	Carr Size (in)	Phasing (*)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201 2 12:00AM	MESAVERDE/		of distance of the second	7,366.0	7,367.0				EXP/	3.375	120.00			PRODUCTIO N	7 7 70   30 15
	MESAVERDE/	-	THE CONTRACT AND ADDRESS OF TH	7,446.0	7,447.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			7,472.0	7,473.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			7,490.0	7,491.0	3.00	A 100	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/		III III III III III III III III III II	7,496.0	7,497.0	3.00		0.360	EXP/	3.375	120.00	V V V V V V V V V V V V V V V V V V V	23.00	PRODUCTIO N	10 mm
	MESAVERDE/	A STATE OF THE STA	The second section is a second section of the second section of the second section is a second section of the second section of the second section is a second section of the s	7,520.0	7,522.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	THE PROPERTY OF THE PROPERTY O	MANAGEMENT TO ANGLE AND ANGLE ANGLE AND ANGLE ANGL	7,555.0	7,556.0	3.00		0.360	EXP/	3.375	120.00		1	PRODUCTIO N	
	MESAVERDE/	WHO DESCRIPTION WHILE AND ADDRESS OF THE PARTY OF THE PAR		7,568.0	7,569.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			7,603.0	7,604.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			7,636.0	7,637.0	3.00	1000	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			7,662.0	7,663.0	3.00	A parameter of the second of t	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	***************************************		7,673.0	7,674.0	3.00		0.360	EXP/	3.375	120.00		- 1	PRODUCTIO N	
	MESAVERDE/			7,711.0	7,712.0	3.00	The state of the state of the state of	0.360	EXP/	3.375	120.00		1	PRODUCTIO N	MIN COLUMN TO THE PARTY OF THE
	MESAVERDE/	111111111111111111111111111111111111111		7,724.0	7,725.0	3.00		0.360	EXP/	3.375	120.00		1	PRODUCTIO N	

Date	Formation/i Reservoir	CCL@ (usft)	CCL-Ti S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/i Diam Add. Shot r		Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201 2 12:00AM	MESAVERDE/		2	7,804.0	7,805.0			360 EX	<b>P</b> /	3.375	120,00			PRODUCTIO N	×5 15.
·	MESAVERDE/		THE STATE OF THE S	7,846.0	7,847.0	3.00	0.	360 EX	P/	3.375	120.00	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	23.00	PRODUCTIO N	
	MESAVERDE/			7,944.0	7,945.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	dely different learning and the second		7,972.0	7,973.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/		N. WIND THE CONTRACT OF THE CO	7,992.0	7,993.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,007.0	8,008.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	V V V V V V V V V V V V V V V V V V V		8,036.0	8,038.0	3.00	0,	860 EX	Pl	3.375	120.00		23.00	PRODUCTIO N	TOTAL CONTRACTOR OF THE PARTY O
*** ***********************************	MESAVERDE/			8,070.0	8,071.0	3.00	0.3	860 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,084.0	8,085.0	3.00	0.:	860 EXI	PI	3.375	120.00		23.00	PRODUCTIO N	The state of the s
12/31/201 2 12:00AM	MESAVERDE/			8,185.0	8,186.0	3.00	0.3	60 EX	P/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/	A PAPARA DE LA PARA DEPARA DE LA PARA DE LA		8,196.0	8,197.0	3.00	0.3	60 EX	9/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	A A A A A A A A A A A A A A A A A A A		8,270.0	8,271.0	3.00	0.3	60 EX	P/	3.375	120.00			PRODUCTIO N	N et al de la constant de la constan
	MESAVERDE/	The state of the s		8,306.0	8,308.0	3.00	0.0	60 EXF	<b>)</b>	3.375	120.00		i	PRODUCTIO N	
	MESAVERDE/		111111111111111111111111111111111111111	8,373.0	8,374.0	3.00	0.3	60 EXF	<b>)</b>	3.375	120.00		1	PRODUCTIO N	

Date	Formation// Reservoir	CCL@ (usft)	CCL-Ti	MD Top (usft)	MD Base (usft)	Shot Density	Misfires/ I	Diamete'	Carr Type /Stage No	Carr. Size	Phasing	Charge Desc/Charge Manufacturer	Charge Weight	Reason	Misrum
		N. J. San	(usft)	\	,	(shot/ft)		(in):		(in)			(gram)	Strate St. Company	7 ( 14)
2	MESAVERDE/			8,417.0	8,418.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	The second secon
12:00AM	L														
2	MESAVERDE/		ANTALANA MANAGAMAN	8,456.0	8,457.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM				0 5040	0 525 0	2.00		0.200	EVDI	2 275	400.00		20.00	DDODUGTIO	
2	MESAVERDE/	Att at the second secon		8,534.0	8,535.0	3.00	The property of the property o	0.360	EAP/	3.375	120.00			PRODUCTIO N	The state of the s
12:00AM				0.507.0	0.500.0			0.000	EVO	0.075	400.00	The Particular Control of the Contro	20.00	DDODUGTIO	
2	MESAVERDE/			8,567.0	8,568.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	######################################
12:00AM	NEO AVENDE			0 505 0	0 500 0	3.00		0.360	EVDI	0.075	400.00	TO THE WALLES AND A CONTROL OF THE PARTY OF	00.00	DDODLIGTIC	
2	MESAVERDE/			8,585.0	8,586.0	3.00		0.360	EAP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,600.0	8,601.0	3.00	app.	0.360	EVD/	3.375	120.00		22.00	PRODUCTIO	
12:00AM	MESAVERDE/			0,000.0	0,001.0	3.00	mann e diverbibilità	0.360	EAP	3.373	120,00		23.00	N PRODUCTIO	
	MESAVERDE/	-		8,681.0	8,682.0	3.00		0.360	EYD/	3.375	120.00		23.00	PRODUCTIO	
2 12:00AM	INCOAVERDE/			0,001.0	0,002.0	5.00	Oceanococci de Angeles	0.500		3.575	120,00		25.00	N	
	MESAVERDE/			8,706.0	8,707.0	3.00	9	0.360	EXP/	3.375	120.00		23 00	PRODUCTIO	
2 12:00AM				-,,	-,		**************************************	1000						N	
12/31/201 2 12:00AM	MESAVERDE/			8,726.0	8,727.0	3.00		0.360	EXP/	3.375	120.00		i	PRODUCTIO N	
	MESAVERDE/			8,743.0	8,744.0	3.00		0.360	EXP/	3.375	120.00		- 1	PRODUCTIO N	
12:00AM				441		and the same of th			P T					••	
12/31/201 2	MESAVERDE/			8,757.0	8,758.0	3.00		0.360	EXP/	3.375	120.00		i	PRODUCTIO N	The state of the s
12:00AM			1	a sales											
12/31/201 2	MESAVERDE/	7.11	771	8,809.0	8,810.0	3.00	A commence of the commence of	0.360	EXP/	3.375	120.00			PRODUCTIO N	
12:00AM			11 11												
2	MESAVERDE/		D-HHHHHHhhrmitinesses	8,830.0	8,831.0	3.00	ARROPOLINA DE PARADA DE LA CALLADA DE LA CAL	0.360	EXP/	3.375	120.00		1	PRODUCTIO N	
12:00AM				4444											
12/31/201 2 12:00AM	MESAVERDE/			8,858.0	8,859.0	3.00	Total Carlot	0.360	EXP/	3.375	120.00	The state of the s	:	PRODUCTIO N	

Date	Formation/i Reservoir	CCL@ (usft)	CCL-T) S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/j Add_Shot	Diamete' ri (in)	Carr Type /Stage No.	Carr Size (in)	Phasing (°)	Charge Desc /Charge, Manufacturer	Charge Weight (gram)	Reason	Misrun
2	MESAVERDE/	and <u>1,000,000,000,000,000,000,000,000</u>	T MCOID	8,934.0	8,935.0		ACC Secretary Se		EXP/	3.375	120.00	and the second section of the second section of the second section of the second section of the second section		PRODUCTIO N	
12:00AM 12/31/201 2 12:00AM	MESAVERDE/			8,963.0	8,964.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	A PART OF THE LABOR.		8,987.0	8,988.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/201 2	MESAVERDE/	A THE STATE OF THE		9,013.0	9,014.0	3.00	MAA AMADON 9999 AAAA AAAA AAAA AAAA AAAA AAAA AA	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	III I
2	MESAVERDE/	TITLE	HIII	9,037.0	9,038.0	3.00	7.00	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	CIAL PROPERTY AND ADMINISTRATION OF THE PROPERTY AN
2	MESAVERDE/		Address Addres	9,073.0	9,075.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM 12/31/201 2 12:00AM	MESAVERDE/			9,144.0	9,145.0	3.00	-	0.360	EXP/	3.375	120.00			PRODUCTIO N	THE PROPERTY OF THE PROPERTY O
	MESAVERDE/		III MARIANI III Ali cidente de constante de	9,162.0	9,163.0	3.00		0.360	EXP/	3.375	120,00		23.00	PRODUCTIO N	Alle Control of the C
	MESAVERDE/		110 Maria 11 11 11 11 11 11 11 11 11 11 11 11 11	9,184.0	9,185.0	3.00		0.360	EXP/	3.375	120.00	CANADA MARANA ANA	23.00	PRODUCTIO N	
	MESAVERDE/		TO THE PARTY OF TH	9,197.0	9,198.0	3.00	To the state of th	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	L. Carriero	The state of the s	9,237.0	9,238.0	3.00	77	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	1.0	THE STREET, AND ADDRESS.	9,258.0	9,259.0	3.00	or control of the con	0.360	EXP/	3.375	120.00		- 1	PRODUCTIO N	
	MESAVERDE/	497		9,286.0	9,287.0	3.00		0.360	EXP/	3.375	120.00		1	PRODUCTIO N	
	MESAVERDE/			9,318.0	9,319.0	3.00	an a	0.360	EXP/	3.375	120.00			PRODUCTIO N	

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No.	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrum
12/31/201 2 12:00AM	MESAVERDE/			10,050.0	10,051.0		1000		EXP/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/		The second secon	10,059.0	10,060.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/		A Commence of the Commence of	10,075.0	10,076.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,091.0	10,092.0	3.00	77.7	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,105.0	10,107.0	3.00	Polymorphy and A polymo	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,120.0	10,121.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,125.0	10,126.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	And the second s
12/31/201 2 12:00AM	MESAVERDE/			10,152.0	10,153.0	3.00	and the second s	0.360	EXP/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/			10,170.0	10,171.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/	and and any and any and any and any		10,214.0	10,215.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	OCCUPATION AND ASSESSMENT OF A SECRETARY
12/31/201 2 12:00AM	MESAVERDE/			10,223.0	10,224.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/			10,238.0	10,239.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			10,243.0	10,244.0	3.00	- I	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			10,273.0	10,274.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete f (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201 2 12:00AM	MESAVERDE/			10,369.0	10,370.0	3.00		0.360	EXP/	3.375	120.00		23.00 F	PRODUCTIO	

### 3 Plots

### 3.1 Wellbore Schematic



## US ROCKIES REGION ....

	Operation Summary Report											
Well: MORGAN	STATE 9	921-36J1CS (	GREEN			CONTRACTOR CO. C. PROPERTY OF	Min. III. S. Wag C. House	Spud Date: 9/9/20	012			
Project: UTAH-U	IINTAH			Site: MOF	RGAN ST	ATE 921	-36J PAD		Rig Name No: GWS 1/1			
Event: COMPLE	TION			Start Date	e: 1/4/201	3			End Date: 1/23/2013			
Active Datum: R	KB @5,0	79.00usft (ab	ove Mean Sea	1	UWI: N	N/SE/0/9	/S/21/E/36	6/0/0/26/PM/S/2118	JE/0/1784/0/0			
Level)	E We Yes	AND THE RESERVE	Annual control of the	-to the territory was the to what the		I was a second						
Date	1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Time tart-End	Duration (hr)	Phase :	Code	Sub Code	P/U	MD From (usft)	Operation			
9/9/2012		-							* O TO STORY OF THE STORY OF TH			
9/10/2012		-										
1/4/2013	8:00 7:00	- 9:00 - 18:00	1.00	FRAC	33	С	Р	; ;	FILL SURFACE CSG. MIRU CAMERON QUICK TEST. 1ST PSI TEST T/ 9000 PSI. HELD FOR 15 MIN LOST 57 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL.SWIFN			
1/8/2013	7:00	- 18:00	11.00	FRAC	34		Р		PERF 1ST STAGE AS PER DESIGN.			
1/0/2013	7.50	- 16.00	11.00	FRAC	36	В	Р		FINISH SPOTTING IN EQUIPMENT AND R/U. PRESSURE TEST LINES GOOD @ 9500 PSI. PERF & FRAC FOLLOWING WELL AS PER DESIGN W/ 20/40 MESH TLC SAND (LOWER MESAVERDE) 30/50 MESH SAND (ALL OTHER STGS) & SLK WTR. ALL CBP'S ARE HALIBURTON 8K CBP'S.			
									FRAC STG 1) WHP 783 PSI, BRK 4098 PSI @ 5.2 BPM. ISIP 3092 PSI, FG .0.74, CALC PERFS OPEN @ 49.5 BPM @ 5556 PSI = 100% HOLES OPEN. 0 ISIP 3632 PSI, FG .0.79, NPI 540 PSI. 0 MP 8124 PSI, MR 51.4 BPM, AP 5639 PSI, AR 50.2 BPM, PUMPED 20/40 TLC SAND.			
									PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=10,136', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.			
		, , , , , , , , , , , , , , , , , , ,						;	SWI. DRAIN EQUIP.			

	Operation Summary Repo	ort
Well: MORGAN STATE 921-36J1CS GREEN	Spud Date	e: 9/9/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36J PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 1/4/2013	End Date: 1/23/2013
Active Datum: RKB @5,079.00usft (above Mean Sea Level)		I/S/2118/E/0/1784/0/0
Date     Time   Duration	Phase         Code   Sub   P/U   MD From the control of the cont	
17072010 7.00 18.00 17.00	FIVAC SO B F	HSM, CONT PERF AND FRAC.
		FRAC STG 2) WHP 1827 PSI, BRK 3736 PSI @ 4.7 BPM. ISIP 2272 PSI, FG .0.66, CALC PERFS OPEN @ 50.6 BPM @ 5455 PSI = 88% HOLES OPEN. ISIP 3800 PSI, FG .0.82, NPI 1528 PSI. MP 8247 PSI, MR 51 BPM, AP 5331 PSI, AR 48.9 BPM, PUMPED 20/40 TLC SAND. (HAD TO CUT SAND EARLY, STAGE
		WAS SCREENING OUT.) PUMPED 70% OF DESIGNED VOLUME. SAND WAS @ 1# WHEN CUT.
		PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9349', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		FRAC STG 3) WHP 949 PSI, BRK 2839 PSI @ 4.7 BPM. ISIP 1911 PSI, FG .0.65, CALC PERFS OPEN @ 39.4 BPM @ 5372 PSI = 63% HOLES OPEN. 0 ISIP 2786 PSI, FG .0.74, NPI 875 PSI. 0 MP 5993 PSI, MR 51.2 BPM, AP 4716 PSI, AR 50.5 BPM, PUMPED 30/50 OWATTA SAND. (NOTE: ALSO PUMPED 7000# 20/40 TLC AS PART OF VOLUME).
		PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9105', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		FRAC STG 4) WHP 1205 PSI, BRK 2849 PSI @ 4.7 BPM. ISIP 1888 PSI, FG .0.64, CALC PERFS OPEN @ 56.1 BPM @ 5608 PSI = 95% HOLES OPEN. 0 ISIP 2775 PSI, FG .0.75, NPI 887 PSI. 0 MP 5885 PSI, MR 56.2 BPM, AP 5208 PSI, AR 54.9 BPM, PUMPED 30/50 OWATTA SAND. (NOTE: ALSO PUMPED 5000# 20/40 TLC AS PART OF VOLUME).
		PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8889', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		FRAC STG 5) WHP 1278 PSI, BRK 2345 PSI @ 4.7 BPM. ISIP 1821 PSI, FG .0.65, CALC PERFS OPEN @ 56.1 BPM @ 5154 PSI = 96% HOLES OPEN. 0 ISIP 2700 PSI, FG .0.75, NPI 879 PSI. 0 MP 5880 PSI, MR 56.4 BPM, AP 4962 PSI, AR 55.5 BPM, PUMPED 30/50 OWATTA SAND.
		PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8631', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		SWFN. DRAIN EQUIP.

				rio T	Opera	ition S	umma	ary Report	
Well: MORGAN	STATE 9	21-36J1CS G	REEN		special sections		10,000,000,000	Spud Date: 9/9	/2012
Project: UTAH-L	INTAH			Site: MOF	RGAN ST	ATE 921	-36J PAD		Rig Name No: GWS 1/1
Event: COMPLE	TION			Start Date	: 1/4/201	 13			End Date: 1/23/2013
Active Datum: R Level)	KB @5,07	79.00usft (ab	ove Mean Se	ea	UWI: N	W/SE/0/9	/S/21/E/3	6/0/0/26/PM/S/21	18/E/0/1784/0/0
Date	Alexander of the	Time	Duration (hr)	Phase	Code	Sub Code	. P/U	MD From (usft)	Operation F
1/10/2013	7:00	- 18:00	11.00	FRAC	36	В	Р		CONT PERF AND FRAC.
									FRAC STG 6) WHP 1443 PSI, BRK 2754 PSI @ 4.7 BPM. ISIP 1998 PSI, FG .0.67, CALC PERFS OPEN @ 51.9 BPM @ 4189 PSI = 100% HOLES OPEN. 0 ISIP 2567 PSI, FG .0.74, NPI 569 PSI. 0 MP 4903 PSI, MR 52.5 BPM, AP 4299 PSI, AR 51.7 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8338', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 7) WHP 1084 PSI, BRK 2764 PSI @ 4.7 BPM. ISIP 1721 PSI, FG .0.65, CALC PERFS OPEN @ 51.9 BPM @ 4559 PSI = 100% HOLES OPEN. 0 ISIP 2487 PSI, FG .0.74, NPI 766 PSI. 0 MP 4994 PSI, MR 52 BPM, AP 4258 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8056', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 8) WHP 1390 PSI, BRK 2459 PSI @ 4.7 BPM. ISIP 1900 PSI, FG .0.68, CALC PERFS OPEN @ 52.2 BPM @ 4006 PSI = 100% HOLES OPEN. 0 ISIP 2474 PSI, FG .0.75, NPI 574 PSI. 0 MP 4658 PSI, MR 53.2 BPM, AP 4147 PSI, AR 51.9 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7755', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 9) WHP 1393 PSI, BRK 2337 PSI @ 4.7 BPM. ISIP 1635 PSI, FG .0.65, CALC PERFS OPEN @ 52.2 BPM @ 4006 PSI = 100% HOLES OPEN. 0 ISIP 2395 PSI, FG .0.75, NPI 760 PSI. 0 MP 4658 PSI, MR 53.2 BPM, AP 4147 PSI, AR 51.9 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7755', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 9) WHP 1393 PSI, BRK 2337 PSI @ 4.7 BPM. ISIP 1635 PSI, FG .0.65, CALC PERFS OPEN @ 52.3 BPM @ 4310 PSI = 96% HOLES OPEN. 0 ISIP 2395 PSI, FG .0.75, NPI 760 PSI. 0 MP 4648 PSI, MR 53.2 BPM, AP 4099 PSI, AR 52.2 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #10] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7545', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCED

				Operat	tion Su	ımma	ry Report	
Well: MORGAN S	TATE 921-36J1C	GREEN	The state of the s				Spud Date: 9/9/2	2012
Project: UTAH-UII	HATV		Site: MOF	RGAN STA	ATE 921-3	6J PAD		Rig Name No: GWS 1/1
Event: COMPLET	ION		Start Date	: 1/4/2013	3			End Date: 1/23/2013
Active Datum: RK Level)	B @5,079.00usft (	above Mean S	ea	UWI: NV	V/SE/0/9/S	S/21/E/36	3/0/0/26/PM/S/211	8/E/0/1784/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub	P/U	MD From (usft)	Operation 型 点面系。
1/11/2013	7:00 - 18:00	11.00	FRAC	36	В	P	(200 44 1 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2	CONT PERRF AND FRAC.
								FRAC STG 10) WHP 821 PSI, BRK 2198 PSI @ 4.7 BPM. ISIP 1209 PSI, FG .0.6, CALC PERFS OPEN @ 52.3 BPM @ 3515 PSI = 100% HOLES OPEN. 0 ISIP 2026 PSI, FG .0.71, NPI 817 PSI. 0 MP 5436 PSI, MR 52.8 BPM, AP 3792 PSI, AR 52 BPM, PUMPED 30/50 OWATTA SAND.
								RIH W/ WIRELINE. SET HAL 8K CBP @7280' (KILL PLUG). SWI. FRAC COMPLETE. READY FOR D/O.
1/21/2013	12:00 - 17:00	5.00	DRLOUT	31	1	P		TOTAL SAND PUMPED = 305,822#  TOTAL FLUID PUMPED = 14,490 BBLS  MIRU, SPOT EQUIP, ND WH, NU 10K BOP, RU FLOOR  & TBG EQUIP, SPOT TBG TRAILER & INSTAL HAND  RAILS, PU 3 7/8" BIT, POBS, 1.875" XN S/N, TALLY
	7:00							& PU TBG TO 2,500', SWI, INSTAL TARPS & HEATER HOSES, DRAIN & WINTERIZE EQUIP, SDFN.
1/22/2013	7:00 - 7:15 7:15 - 16:00	0.25 8.75	DRLOUT DRLOUT	48 31		P P		HSM, SLIPS, TRIPS & FALLS, P/T BOP, D/O PLUGS
	7.10 - 16.00	6.75	DRLOUT	. <b>31</b>		۲		(TEMP -13 BELOW) TALLY & PU TBG, RU P/S, FILL TBG & BREAK CIRC, P/T BOP TO 4,500 PSI, TEST GOOD, SURFACE CSG VALVE OPEN & LOCKED, D/O PLUGS
								Č/O 20' ŠAND, TAG 1ŠT PLUG @ 7,280' DRL PLUG IN 12 MIN. 600 PSI INCREASE RIH, CSG PREŠŠ 0 PSI.
								C/O 25' SAND, TAG 2ND PLUG @ 7,545' DRL PLUG IN 11 MIN. 300 PSI INCREASE RIH, CSG PRESS 100 PSI.
								C/O 20' SAND, TAĞ 3RD PLUG @ 7,755' DRL PLUĞ IN 12 MIN. 400 PSI INCREASE RIH, CSG PRESS 100 PSI.
								C/O 25' SAND, TAG 4TH PLUG @ 8,056' DRL PLUG IN 10 MIN. 600 PSI INCREASE RIH, CSG PRESS 500 PSI.
								C/O 25' SAND, TAG 5TH PLUG @ 8,338' DRL PLUG IN 11 MIN. 500 PSI INCREASE RIH, CSG PRESS 400 PSI.
								EOT @ 8,422', LET WELL CLEAN UP FOR 30 MIN, SWI, DRAIN & WINTERIZE EQUIP, SDFN.
1/23/2013	7:00 - 7:15	0.25	DRLOUT	48		Р		HSM, SLIPS, TRIPS & FALLS, BLEEDING OFF PRESS, D/O PLUGS

### Operation Summary Report

		Operation Summary	Report
Well: MORGAN STATE 921-36J1CS GREEN		Sp	ud Date: 9/9/2012
Project: UTAH-UINTAH	Site: MOI	RGAN STATE 921-36J PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date	e: 1/4/2013	End Date: 1/23/2013
Active Datum: RKB @5,079.00usft (above Mean S	Sea	UWI: NW/SE/0/9/S/21/E/36/0/0	/26/PM/S/2118/E/0/1784/0/0
Level)  Date Time Duration	- Phase -	Code Sub P/U	A COLUMN SALES AND A COLUMN SALE
Start-End (hr)	r nase	Code Sub P/U	MD From Operation (usft)
7:15 - 15:00 7.75	DRLOUT	44 C P	(TEMP -13 BELOW) SICP 2,900 PSI, OPEN & BLEED WELL, D/O REMAINING 5 PLUGS.
			C/O 20' SAND, TAG 6TH PLUG @ 8,631' DRL PLUG IN 12 MIN. 400 PSI INCREASE RIH, CSG PRESS 200 PSI.
			C/O 30' SAND, TAG 7TH PLUG @ 8,889' DRL PLUG IN 10 MIN. 500 PSI INCREASE RIH, CSG PRESS 250 PSI.
			C/O 30' SAND, TAG 8TH PLUG @ 9,105' DRL PLUG IN 11 MIN. 300 PSI INCREASE RIH, CSG PRESS 400 PSI.
			C/O 25' SAND, TAG 9TH PLUG @ 9,349' DRL PLUG IN 12 MIN. 400 PSI INCREASE RIH, CSG PRESS 400 PSI.
			C/O 30' SAND, TAG 10TH PLUG @ 10,136' DRL PLUG IN 10 MIN. 200 PSI INCREASE RIH, CSG PRESS 450 PSI.
			PBTD @ 10,516', BTM PERF @ 10,370', RIH TAGGED @ 10,340', C/O TO PBTD @ 10,516, 146' PAST BTM PERF W/ 331 JTS 2 3/8" P-110 TBG, LD 16 JTS, PU & STRIP IN TBG HANGER & LAND TBG W/ 315 JTS 2 3/8" P-110, EOT 10,003.26'.
			RD POWER SWIVEL, FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT, LET BIT FALL FOR 20 MIN, P/T LINE TO HAL 9000 TO 4,500 PSI, NO VISIBLE LEAKS.
			TURN OVER TO FLOW BACK CREW, RD & MOVE TO NEXT WELL ON PAD.
			KB= 26' 4 1/16" CAMERON HANGER= .83' TBG DELIVERED 336 JTS 315 JTS 2 3/8" P-110 = 9,974,23' TBG USED 315 JTS POBS= 2.20' TBG RETURNED 21 JTS EOT @ 10,003,26'
			TWR= 14,490 BBLS TWR= 3,500 BBLS
15:00 - 15:00 0.00	DRLOUT	50	TWLTR= 10,990 BBLS  WELL TURNED TO SALES @ 1430 HR ON  1/23/2013. 1020 MCFD, 1920 BWPD, FCP 2200#, FTP
1/24/2013 7:00 -		50	1500#, 20/64" CK. WELL IP'D ON 2/1/13 - 1791 MCFD, 0 BWPD, 0 BOPD, CP 2335#, FTP 1566#, LP 105#, 24 HRS, CK 20/64

Project: UTAH - UTM (feet), NAD27, Zone 12N Site: UINTAH\_MORGAN STATE 921-36J PAD Well: MORGAN STATE 921-36J1CS

Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS

Section: SHL:

+N/-S

0.00

Design: MORGAN STATE 921-36J1CS (wp01)

Latitude: 39.991235 Longitude: -109.496339

+E/-W

0.00 145

GL: 5053.00 KB: 26' RKB + 5053 GL @ 5079.00ft (H&P 298) | TVDPath | MDPath | Formation | 1375.00 | 1377.43 | GREEN RIVER | 1673.00 | 1676.35 | BIRDS NEST | 2169.00 | 2174.18 | MAHOGANY MARKER | 4617.00 | 4625.39 | WASATCH | 7280.00 | 7288.42 | MESAVERDE | 9451.00 | 9459.44 | SEGO | 9516.00 | 9524.44 | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 1376.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100

WE	LL DETAILS: MORGA	N STATE 921-3	ej1cs	
Northing 26404.99	Ground Level: Easting 2061591.77	5053.00 Latittude 39.991235	Longitude -109.496339	Slot

	CASING DE	TAILS	
TVD	MD	Name	Size
2619.67	2626.36	8 5/8**	0

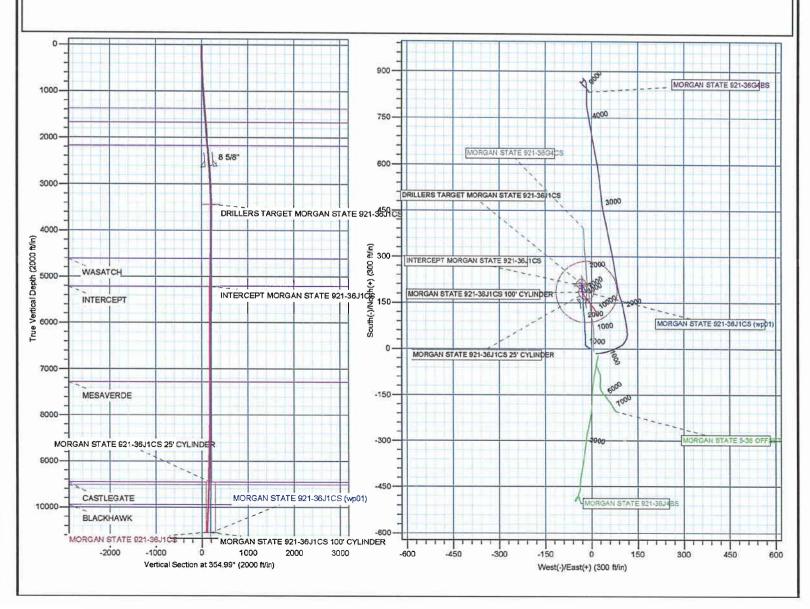


Azimuths to True North Magnetic North: 10.91

Magnetic Field Strength: 52201.8snT Dip Angle: 65.83° Date: 9/6/2012 Model: IGRF2010

DESIGN TARGET DETAILS									
Name DRILLERS TARGET MORGAN STATE 921-36J1CS INTERCEPT MORGAN STATE 921-36J1CS MORGAN STATE 921-36J1CS 25' CYLINDER MORGAN STATE 921-36J1CS 100' CYLINDER	TVD 3433.62 5217.00 9451.00 10545.00	+N/-S 212.27 205.65 185.38 185.38	+E/-W -32.89 -28.79 -16.81 -16.25	Northing 14526516.67 14526510.12 14526590.06 14526590.07	Easting 2061555.30 2061559.51 2061571.84 2061572.40	Latitude 39.991818 39.991800 39.991744 39.991744	-109.496442 -109.496399	Shape Circle (Radius: 15.00) Point Circle (Radius: 25.00) Circle (Radius: 100.00)	

SECTION DETAILS											
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect			
2640.00	4.04	354.69	2633.28	163.10	-28.32	0.00	0.00	164.94			
3240.00	4.04	354.69	3231.79	205.19	-32.23	0.00	0.00	207.22			
3442.00	0.00	0.00	3433.62	212.27	-32.89	2.00	180.00	214.33			
3527.44	0.26	148.25	3519.06	212.11	-32.79	0.30	148.25	214.16			
10553.45	0.26	148.25	10545.00	185.38	-16.25	0.00	0.00	186.09			



Project: UTAH - UTM (feet), NAD27, Zone 12N Site: UINTAH\_MORGAN STATE 921-36J PAD Well: MORGAN STATE 921-36J1CS

Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS

Section: SHL:

+N/-S

0.00

Design: MORGAN STATE 921-36J1CS (wp01)

Latitude: 39.991235 Longitude: -109.496339

+E/-W

0.00 145

GL: 5053.00 KB: 26' RKB + 5053 GL @ 5079.00ft (H&P 298) | TVDPath | MDPath | Formation | 1375.00 | 1377.43 | GREEN RIVER | 1673.00 | 1676.35 | BIRDS NEST | 2169.00 | 2174.18 | MAHOGANY MARKER | 4617.00 | 4625.39 | WASATCH | 7280.00 | 7288.42 | MESAVERDE | 9451.00 | 9459.44 | SEGO | 9516.00 | 9524.44 | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 1376.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100

WE	LL DETAILS: MORGA	N STATE 921-3	ej1cs	
Northing 26404.99	Ground Level: Easting 2061591.77	5053.00 Latittude 39.991235	Longitude -109.496339	Slot

	CASING DE	TAILS	
TVD	MD	Name	Size
2619.67	2626.36	8 5/8**	0

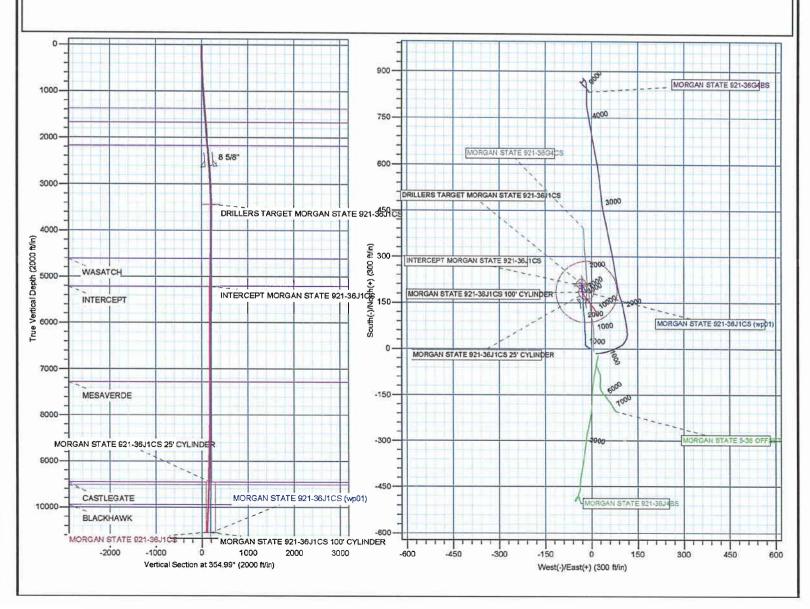


Azimuths to True North Magnetic North: 10.91

Magnetic Field Strength: 52201.8snT Dip Angle: 65.83° Date: 9/6/2012 Model: IGRF2010

DESIGN TARGET DETAILS									
Name DRILLERS TARGET MORGAN STATE 921-36J1CS INTERCEPT MORGAN STATE 921-36J1CS MORGAN STATE 921-36J1CS 25' CYLINDER MORGAN STATE 921-36J1CS 100' CYLINDER	TVD 3433.62 5217.00 9451.00 10545.00	+N/-S 212.27 205.65 185.38 185.38	+E/-W -32.89 -28.79 -16.81 -16.25	Northing 14526516.67 14526510.12 14526590.06 14526590.07	Easting 2061555.30 2061559.51 2061571.84 2061572.40	Latitude 39.991818 39.991800 39.991744 39.991744	-109.496442 -109.496399	Shape Circle (Radius: 15.00) Point Circle (Radius: 25.00) Circle (Radius: 100.00)	

SECTION DETAILS											
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect			
2640.00	4.04	354.69	2633.28	163.10	-28.32	0.00	0.00	164.94			
3240.00	4.04	354.69	3231.79	205.19	-32.23	0.00	0.00	207.22			
3442.00	0.00	0.00	3433.62	212.27	-32.89	2.00	180.00	214.33			
3527.44	0.26	148.25	3519.06	212.11	-32.79	0.30	148.25	214.16			
10553.45	0.26	148.25	10545.00	185.38	-16.25	0.00	0.00	186.09			



## **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_MORGAN STATE 921-36J PAD MORGAN STATE 921-36J1CS

**MORGAN STATE 921-36J1CS** 

Survey: Survey #2

# **Standard Survey Report**

10 October, 2012

### **Andarko Petroleum Corporation**

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH\_MORGAN STATE 921-36J PAD
Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:

Well MORGAN STATE 921-36J1CS 26' RKB + 5053 GL @ 5079.00ft (H&P 298) 26' RKB + 5053 GL @ 5079.00ft (H&P 298)

True
Minimum Curvature

edmp

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Geo Datum:

Design:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

MORGAN STATE 921-36J1CS

System Datum:

Mean Sea Level

**Map Zone:** Zone 12N (114 W to 108 W)

Site UINTAH\_MORGAN STATE 921-36J PAD

Site Position: From:

Lat/Long

Northing: Easting: 14,526,383.50 usft 2,061,613.14 usft

Latitude: Longitude: 39.991175 -109.496264

Position Uncertainty:

0.00 ft

Slot Radius:

13-3/16 "

Grid Convergence:

09.49620 0.97 °

 Well
 MORGAN STATE 921-36J1CS

 Well Position
 +N/-S
 0.00 ft

Well Position +N/-S +E/-W

0.00 ft

Northing: Easting:

**g:** 14,526,404.99 usft : 2,061,591.77 usft Latitude: Longitude: 39.991235 -109.496339

Position Uncertainty

0.00 ft

Wellhead Elevation:

ft

Ground Level:

5,053.00 ft

	Wellbore	MORGAN STATE 921-36J10	S See and the see and the see and see an			
1	Magnetics	Model Name	Sample Date	Declination (*)	Dip Angle F	leld Strength (nT)
		IGRF2010	9/6/2012	10.91	65.83	52,202

Design MORGAN STATE 921-36J1CS **Audit Notes:** Version: 1.0 Phase: ACTUAL Tie On Depth: 22.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 22.00 0.00 0.00 350.15

Survey Program 10/8/2012 From To (ft) (ft) Survey (Wellbore) **Tool Name** Description 189.00 2,640.00 Survey #1 (MORGAN STATE 921-36J1CS MWD MWD - STANDARD 3,790.00 10,550.00 Survey #2 (MORGAN STATE 921-36J1CS MWD MWD - STANDARD

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,640.00	4.04	354.69	2,633.28	163.10	-28.32	165.54	0.00	0.00	0.00
TIE ON					New Historia				
3,790.00	0.25	196.44	3,782.38	201.04	-32.78	203.69	0.37	-0.33	-13.76
FIRST MWD	SURVEY								
3,884.00	0.56	185.07	3,876.37	200.39	-32.88	203.06	0.34	0.33	-12.10
3,978.00	0.69	177.32	3,970.37	199.37	-32.89	202.05	0.16	0.14	-8,24
4,073.00	0.75	205.94	4,065.36	198.24	-33.14	200.98	0.38	0.06	30.13
4,167.00	0.88	178.32	4,159.35	196.96	-33.38	199.77	0.44	0.14	-29.38
4,262.00	1,00	177.82	4,254.34	195.40	-33.33	198.22	0.13	0.13	-0,53

### **Andarko Petroleum Corporation**

Survey Report

North Reference:

Company: Project: Site: US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_MORGAN STATE 921-36J PAD

Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS
Design: MORGAN STATE 921-36J1CS

Local Co-ordinate Reference: TVD Reference: MD Reference:

Survey Calculation Method: Database: Well MORGAN STATE 921-36J1CS 26' RKB + 5053 GL @ 5079.00ft (H&P 298) 26' RKB + 5053 GL @ 5079.00ft (H&P 298)

True

Minimum Curvature

edmp

	TGAN STATE 92	i da sa kasa sa a da anaka da kasa da ka	er un of prepared makes bestimmen	Database:	MOTE SHELL		edmp	Santana. Katabatan menengan mengan	takta da frintin melanggapanan	
Py Measured			Vertical			Vertical	Dogleg	Bulld	Turn	
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate	
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100usft)	(°/100usft)	(°/100usft)	
4,356.00	1.25	172.32	4,348.32	193.57	-33.16	196.39	0.29	0.27	-5.85	
4,451.00	1.44	168.82	4,443.30	191,37	-32.79	194,16	0.22	0.20	-3,68	
4,545.00	0.56	191.57	4,537.28	189.76	-32.66	192.55	1.01	-0.94	24.20	
4,640.00	0.75	194.94	4,632.27	188.70	-32.91	191.55	0.20	0.20	3.55	
4,743.00	0.69	183.94	4,735,27	187.43	-33,13	190.34	0.15	-0.06	-10.68	
4,837.00	0.81	191,19	4,829.26	186.22	-33.29	189.17	0.16	0.13	7.71	
4,932.00	0.38	24,19	4,924.26	185.85	-33.30	188,80	1,25	-0.45	-175.79	
5,026.00	0.31	25.82	5,018.25	186.36	-33.06	189.27	0.08	-0.07	1.73	
5,120.00	0.19	26,57	5,112.25	186.73	-32.88	189.60	0.13	-0,13	0.00	
5,215.00	0.19	54.44	5,207.25	186.96	-32.68	189.80	0.13	-0, 13 0,00	0.80 29.34	
5,309.00	0.19	91.07	5,301.25	187.05	-32.40	189.83	0.10	0.00		
5,404.00	0.22	114.66	5,396.25	186.97	-32.40	189.70	0.13		38.97	
5,498.00	0.25	132.07	5,490.25	186.76	-32.07 -31.76	189.44	0.08	0.03 0.03	24.83 18.52	
5,592.00	0.38	135.82	5,584.25	186.40	_31.30	190.00	0.14	0.44		
5,687.00	0.50	134.69	5,564.25 5,679.25		-31.39	189.02	0.14	0.14	3.99	
5,781.00	0.63	133.69	5,679.25 5,773.24	185.88	-30.87	188.42	0.13	0.13	-1.19	
5,876.00	0.69	139.82	5,773.2 <del>4</del> 5,868.24	185.23	-30,21	187.67	0.14	0.14	-1.06	
5,970.00	1.00	142.82	5,868.24 5,962.23	184.44 183.35	-29.46 -28.60	186.76 185.54	0.10 0.33	0.06 0.33	6.45 3.19	
6.064.00	0.75		•							
6,064.00	0.75	14.19	6,056.22	183.29	-27,95	185.37	1.68	-0.27	-136.84	
6,159.00	0.88	15.07	6,151.21	184.60	-27.61	186.60	0.14	0.14	0.93	
6,254.00	0.56	20.69	6,246.20	185.74	-27.26	187.66	0.34	-0.34	5.92	
6,348.00	0.38	42.19	6,340.20	186.40	-26.89	188.25	0.26	-0.19	22.87	
6,442.00	0.31	100.69	6,434.20	186.58	-26.43	188.35	0.36	-0.07	62.23	
6,537.00	0.50	136.94	6,529.20	186,23	-25.89	187.92	0.33	0.20	38.16	
6,631.00	0.75	292.82	6,623.19	186.17	<b>-</b> 26.18	187.91	1.30	0.27	165.83	
6,726.00	0.81	280.07	6,718.19	186.53	-27.41	188.47	0.19	0.06	-13.42	
6,820.00	0.56	268.69	6,812.18	186.64	-28.53	188.76	0.30	-0.27	-12.11	
6,915.00	0.50	262.57	6,907.17	186.57	-29.40	188.85	0.09	-0.06	-6,44	
7,010.00	0.13	249.57	7,002.17	186.48	-29.91	188.85	0.39	-0.39	-13.68	
7,104.00	0.38	229.32	7,096.17	186.24	-30.25	188.67	0.28	0.27	-21.54	
7,199.00	0.31	199.69	7,191.17	185.79	-30.57	188,28	0.20	-0.07	-31,19	
7,293.00	0.44	189.44	7,285.17	185.20	-30.72	187.72	0.16	0.14	-10.90	
7,388.00	0.50	358.44	7,380.17	185.25	-30.79	187.79	0.98	0.06	177.90	
7,482.00	0.06	48.69	7,474.17	185.69	-30.76	188.22	0.49	-0.47	53.46	
7,576.00	0.25	136.32	7,568.17	185.58	-30.59	188.07	0.49	0.20	93.22	
7,671.00	0.69	143.94	7,663.16	184.97	-30.33	187.39	0.47	0.46	8.02	
7,765.00	1.19	144.57	7,757.15	183.71	-29.21	186.00	0.47	0.48	0.67	
7,860.00	1.31	152.32	7,852.13	181.95	-28.13	184.08	0.53	0.53	8.16	
7,954.00	1.63	150.44	7,946.10	179.83	-26.97	181.80	0.34	0.34	0.00	
8,048.00	1.69	153,32	8,040.06	179.63	-26.97 -25.69	179.21	0.34	0.34	-2.00	
8,143.00	1.75	145.07	8,135.01	174.99	-24.23	179.21	0.11		3.06	
8,237.00	1.73	140.44	8,228.98	174.99	-24.23 -22.69			0.06	-8.68	
	1.00	140.44	0,220.90	172.54	-22.09	174.27	0.42	-0.39	-4.93	

### **Andarko Petroleum Corporation**

Survey Report

Company: Project: Site:

Well:

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N UINTAH MORGAN STATE 921-36J PAD

MORGAN STATE 921-36J1CS
MORGAN STATE 921-36J1CS

Wellbore: MORGAN STATE 921-36J1CS
Design: MORGAN STATE 921-36J1CS

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well MORGAN STATE 921-36J1CS

26' RKB + 5053 GL @ 5079.00ft (H&P 298) 26' RKB + 5053 GL @ 5079.00ft (H&P 298)

True

Minimum Curvature

edmp

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,426.00	1,44	145.07			era (j. 18. 1986), jedan				
8,520.00	0.88	145.07	8,417.93 8,511.91	169.48 167.91	-20.16	170.43	0.27	0.27	0.00
8,615.00	0.00	161.69	•		-19.09	168.70	0.60	-0.60	1.99
8,709.00	1.19	140.44	8,606.90	166.56	-18.45	167.26	0.25	0.06	15.53
8,804.00			8,700.88	165.07	-17.58	165,65	0.49	0.27	-22.61
8,804.00	1.50	132.69	8,795.86	163.47	-16.04	163.80	0.38	0.33	-8.16
8,899.00	1.50	141.19	8,890.82	161.66	-14.35	161.73	0.23	0.00	8.95
8,993.00	1.69	139.57	8,984.79	159.64	-12.68	159,46	0.21	0.20	-1.72
9,088.00	1.94	144.69	9,079.74	157.26	-10.84	156.80	0.31	0.26	5.39
9,182.00	1.88	139.57	9,173.69	154.79	-8.92	154.04	0.19	-0.06	-5.45
9,276.00	2.00	136.19	9,267.63	152.44	-6.78	151.35	0.18	0.13	-3.60
9,371.00	1.69	136.44	9,362.58	150.22	-4.67	148.81	0.33	-0.33	0.26
9,465.00	2.00	151.44	9,456.54	147.78	-2.93	146.10	0,61	0.33	15.96
9,749.00	2.44	143.69	9,740.32	138.55	3.02	136.00	0.19	0.15	-2.73
10,032.00	2.56	147.69	10,023.05	128.36	9.96	124.76	0.07	0.04	1.41
10,127.00	2.63	151.32	10,117.96	124.65	12.14	120.74	0.19	0.07	3.82
10,488.00	2.81	153.82	10,478.55	109.45	20.02	104.41	0.06	0.05	0.69
LAST MWD	SURVEY								
10,550.00	2.81	153.82	10,540.47	106.72	21.36	101.49	0.00	0,00	0,00

Survey Annotations	educiyadır. (C. 1864 ilkili) (C. 1821) (C.		year da johrtoskir kirikalariya P	ar en mantende mentende de la lactica de la companya de la lactica de la lactica de la lactica de la lactica d
Measured	Vertical	Local Coord	nates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
2,640.00	2,633.28	163.10	-28.32	TIE ON
3,790.00	3,782.38	201.04	-32.78	FIRST MWD SURVEY
10,488.00	10,478.55	109.45	20.02	LAST MWD SURVEY
10,550.00	10,540.47	106.72	21.36	PROJECTION TO TD

Checked By:	Approved By:	Date:	
1			

### STATE OF UTAH

AMENDED REPORT	FORM 8
(highlight changes)	
5. LEASE DESIGNATION AND SERIAL	NUMBER:

				OF NATUR						5. L	EASE DE			ERIAL NUMBE	ER:
						<del>.</del>					ML 22		E OD TO	DE MANE	
	L COMPLI	ETION	OR R	ECOMF	LETIC	N RI	EPOF	RT AND	LOG	6. IF	- INDIAN,	ALLOTTE	= OR TRI	BE NAME	
1a. TYPE OF WELL		OIL C	] G	AS ÆLL 🔽	DRY		ОТН	ER		7. U	NIT or CA	AGREEM	ENT NAM	IE	
b. TYPE OF WOR NEW WELL	K: HORIZ. LATS.	DEEP-	] R	E- NTRY	DIFF. RESVR.		ОТН	ER				ME and NU		921-36J	1CS
2. NAME OF OPER KERR MC	ATOR: CGEE OIL & (	GAS ON	SHOR	E, L.P.							РІ NUMB 43047	ER: '52255			
3. ADDRESS OF O		CITY <b>DE</b>	NVER	STA	те СО	ZIP 802	217		NUMBER:		10 FIELD AND POOL, OR WILDCAT NATURAL BUTTES				
4. LOCATION OF V	VELL (FOOTAGES) NWSE 2118	FSL 17	84 FEL	S36, T99	S R21F			<del></del>	-	2.0				SHIP, RANGE	
AT TOP PRODUCING INTERVAL REPORTED BELOW: NWSE 2303 FSL 1815 FEL S36,T9S,R21E											NSE	36	9S	21E S	
	TH: NWSE 22										COUNTY		1	3. STATE	JTAH
14. DATE SPUDDE 8/22/2012		E T.D. REAC 2/2012	HED:	16. DATE COM			ABANDON	ED	READY TO PRODUC		17. ELE	VATIONS (		, RT, GL):	
18. TOTAL DEPTH:	<sup>MD</sup> 10,550 ⊤VD 10,540		19. PLUG E	BACK T.D.: ME	10,516 10,506		20. IF I	MULTIPLE CO	OMPLETIONS, HOW	MANY? *		TH BRIDG	GE MD		
22. TYPE ELECTRI	C AND OTHER MEC	Manager V Sect. 10	GS RUN (S		100 7.8 70 70 70 7	<u> </u>		23.					172	<u> 11 jajani hi</u>	
BHV-SD/DS	SN/ACTR-CB	L/GR/C	CL/TEN	ΜP				WAS DST	L CORED? RUN? NAL SURVEY?	NO NO NO	<u></u>	YES T	(Subr	nit analysis) nit report) nit copy)	
24. CASING AND L	INER RECORD (Rep	ort all string	s set in wel	II)				DI. 120110	, with contract :	110	Ш	120 0	(Gubi	ти сору)	
HOLE SIZE	SIZE/GRADE	WEIGHT	(#/ft.)	TOP (MD)	вотто	M (MD)		EMENTER EPTH	CEMENT TYPE & NO. OF SACKS	SLUI VOLUM		CEMEN	T TOP **	AMOUNT	PULLED
20"	14" STL	36.	7#	0	4	0			28						
11"	8 5/8" IJ-55	28	#	0	2,6	375						0	1		
7 7/8"	4 1/2" P-110	11.0	6#	0	10,	540			2,255			12	294		
								***							
25. TUBING RECO															
2 3/8"	DEPTH SET (M	D) PACK	ER SET (M	D) S	IZE	DEPTH	SET (MD)	PACKE	R SET (MD)	SIZE	]	DEPTH SE	Γ (MD)	PACKER SI	ET (MD)
26. PRODUCING IN	10,003														
FORMATION		OP (MD)	BOTTON	4 (MD) TO	OP (TVD)	BOTTO	M (TVD)		RATION RECORD	SIZE	NO. HO	ES I	DEDEOL	RATION STAT	116
(A) MESAVE		7,330	10,3		(,,,,,		( ,	7,330	10,370	0.36	23		F 21	Squeezed	7
(B)		.,	1,4,5					,000		0.00	20	Ope	=	Squeezed	╤
(C)					••			SA TA TA				Ope	==	Squeezed	<del>-</del>
(D)				<u> </u>				<u> </u>				Ope		Squeezed	
	RE, TREATMENT, C	EMENT SQU	EEZE, ETC					<u> </u>	<u> </u>					EIVED	
DEPTH	INTERVAL						AM	T DNA TNUC	YPE OF MATERIAL						
7330-10370	)	PUN	ЛР 14,4	190 BBLS	SLICK	H2O 8	§ 305.8	322 LBS	30/50 OTTA	WA SA	AND	F	EB 2	7 2013	
			STAGE	************										SAS & MINI	
29. ENCLOSED AT	TACHMENTS:			****										L STATUS:	
	TRICAL/MECHANICA		CEMENT	VERIFICATION	$\equiv$	GEOLOG CORE AN	IC REPOR IALYSIS		DST REPORT	DIREC	TIONAL	SURVEY		PROD	)
													i		

INITIAL	

#### INTERVAL A (As shown in item #26)

1/23/2013		2/1/2013		HOURS TESTED	HOURS TESTED: T:		OIL – BBL:	GAS - MCF: 1,791	WATER – BBL:	PROD. METHOD: FLOWING
CHOKE SIZE: 20/64	TBG. PRESS. 1,566	CSG. PRESS. 2,335	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF: 1,791	WATER - BBL:	INTERVAL STATUS: PROD
				INT	ERVAL B (As sho	wn in item #26)				•
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	);	TEST PRODUCTION RATES: →	OIL - BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU - GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:
				INT	ERVAL C (As sho	wn in item #26)	·		<del>_</del>	
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	HOURS TESTED:		OIL – BBL:	GAS - MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER – BBL:	INTERVAL STATUS:
				INT	ERVAL D (As sho	wn in item #26)	<del></del>			<u> </u>
DATE FIRST PR	ODUCED:	TEST DATE:		HOURS TESTED	);	TEST PRODUCTION RATES: →	OIL ~ BBL:	GAS MCF:	WATER - BBL:	PROD. METHOD:
CHOKE SIZE:	TBG. PRESS.	CSG. PRESS.	API GRAVITY	BTU – GAS	GAS/OIL RATIO	24 HR PRODUCTION RATES: →	OIL – BBL:	GAS - MCF:	WATER - BBL:	INTERVAL STATUS:
32. DISPOSITION SOLD	ON OF GAS (Sold,	Used for Fuel, Ve	ented, Etc.)	<b>!</b>	<b></b>	•				
		IES (Include Aquit	•	als and all drill-stem	n tests, including de		I. FORMATION	(Log) MARKERS:		-

tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

Formation	Top (MD)	Bottom (MD)	Descriptions, Contents, etc.	Name	Top (Measured Depth)
				GREEN RIVER BIRD'S NEST MAHOGANY WASATCH MESAVERDE	1,375 1,673 2,169 4,654 7,320

35. ADDITIONAL REMARKS (Include plugging procedure)

The first 210' of the surface hole was drilled with a 12 1/2" bit. The remainder of surface hole was drilled with an 11" bit. DQX P-110 csg was run from surface to 5061'; LTC P-110 csg was run from 5061' to 10,540'. Attached is the chronological well history, perforation report & final survey.

86.	I hereby certify that the foregoing and attache	nformation is complete and correct as determined from all available records.
-----	---	--

NAME (PLEASE PRINT) LINDSEY FRAZIER

REGULATORY ANALYST

SIGNATURE

2/22/2013

This report must be submitted within 30 days of

- completing or plugging a new well
- drilling horizontal laterals from an existing well bore
- · recompleting to a different producing formation
- reentering a previously plugged and abandoned well
- significantly deepening an existing well bore below the previous bottom-hole depth
- drilling hydrocarbon exploratory holes, such as core samples and stratigraphic tests

\* ITEM 20: Show the number of completions if production is measured separately from two or more formations.

\*\* ITEM 24: Cement Top – Show how reported top(s) of cement were determined (circulated (CIR), calculated (CAL), cement bond log (CBL), temperature survey (TS)).

Send to: Utah Division of Oil, Gas and Mining

1594 West North Temple, Suite 1210

Box 145801

Salt Lake City, Utah 84114-5801

Phone: 801-538-5340

Fax: 801-359-3940

200				2000 1155 164 - 154	Opera	tion S	umma	ry Report					
Well: MORGAN S	TATE 9	21-36J1CS G	REEN			4 - kii	allianisti (Appara Sar Andrea	Spud Date: 9/9/	2012				
Project: UTAH-UI	NTAH			Site: MOF	RGAN ST	ATE 921	-36J PAD		Rig Name No: PROPETRO 11/11, H&P 298/298				
Event: DRILLING				Start Date	: 8/16/20	12		End Date: 10/4/2012					
Active Datum: RK Level)	(B @5,0	79.00usft (ab	ove Mean S	iea	UWI: NV	V/SE/0/9	S/21/E/36	6/0/0/26/PM/S/211	8/E/0/1784/0/0				
Date	St	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	"MD From (usft)	Operation 4.5				
9/9/2012		- 2:30	1.00	MIRU	01	В	Р		M.S. 921-36J1CS (WELL 4 OF 4) INSTALL DIVERTER HEAD AND BUOY LINE. RIG UP NOV. SPOT IN RIG. SPOT IN CATWALK AND PIPE RACKS. RIG UP PUMP. PRIME PUMP. INSPECT RIG. SAFETY MEETING				
27 %	2:30	- 3:00	0.50	DRLSUR	06	Α	Р		PICK UP #1 BHA				
	4:30	- 4:30	1.50	DRLSUR	02	D	Р		DRL F/44' - T/210' (166' @ 110.6' ROP) W.O.B. 5-15K  RPM = 45 POWERHEAD / 83 MUD MOTOR  UP/DWN/ROT = 22/20/20 2K DRAG  PSI ON/OFF = 600/400  M.W. 8.5# VIS 27  491 GPM PUMP RATE / NO AIR  TORQUE ON/OFF = 3000/900  NOV-ONLINE  HOLE CONDITION = GOOD				
		- 6:30	2.00	DRLSUR	06	Α	P		TOOH WITH #1 BHA / TIH WITH #2 BHA				
	6:30	- 7:00	0.50	DRLSUR	02	D	Р		DRL F/210' - T/240'				
	7.00	- 9:30	2.50	DRLSUR	80	В	Z		***REPLACE WASH TUBE AND PACKING ON				
	9;30	- 16:00	6.50	DRLSUR	02	D	P		POWERHEAD  DRL F/240' - T/1210' ( 970' @ 149' ROP ) W.O.B. = 18/20K  RPM = 45 POWERHEAD / 83 MUD MOTOR  UP/DWN/ROT = 55/40/45 10K DRAG  PSI ON/OFF = 1050/850  M.W. 8.5# VIS 27  491 GPM PUMP RATE / NO AIR  TORQUE ON/OFF = 3000/1000  NOV-ONLINE  HOLE CONDITION = GOOD 6' HIGH 2' RIGHT OF LINE  SLID 147' / 10.8%				
	16:00	- 0:00	8.00	DRLSUR	02	D	P		DRL F/1210' - T/ 2110' (900' @ 112.5' ROP) W.O.B. = 18/20K RPM = 45 POWERHEAD / 83 MUD MOTOR UP/DWN/ROT = 70/58/63 7K DRAG PSI ON/OFF = 1360/1130				
					<u></u>				M.W. 8.5# VIS 27 491 GPM PUMP RATE / NO AIR TORQUE ON/OFF = 3000/1300 NOV-ONLINE HOLE CONDITION = GOOD 3.5' HIGH 1.5' RIGHT OF LINE SLID 197' / 9%				

## Dperation Summary Report

Well: MORGAN S	TATE	121-36 1100	GREEN			9. <b>m</b> . (1)		Spud Date: 9/9/20	112
Project: UTAH-UI		21-303103	GREEN	Site: MOF	CAN ST	ATE 024		Spud Date: 9/9/20	
							T PAD		Rig Name No: PROPETRO 11/11, H&P 298/298
Active Datum: RK		70 00uaft (at	- Moon Co	Start Date			SIONIE IOSI	0/0/26/PM/S/2118/	End Date: 10/4/2012
Level)	. മ ധ്രാ, വ	79.00usit (at	oove Mean Se	ed .	OVVI. 14V	V/OE/U/S/C	3/2 1/ =/30/	0/0/20/FIVI/3/21 10/	E/0/1/84/0/0
Date	ú.Ar.	Time 1. *, :	Duration	Phase	Code	Sub 🖈	P/U 🔐	- MD From	Operation
直 打造 特		art-End	(hr)	74 <b>2</b> (1)		C 200 3 2 C		(usft)	
9/10/2012	0:00	- 6:30	6.50	DRLSUR	02	Ď	P		DRL F/2110' - T/ 2683' (573' @ 88.2 ROP ) W.O.B.
									= 18/20K
									RPM = 45 POWERHEAD / 83 MUD MOTOR JP/DWN/ROT = 77/62/69
									PSI ON/OFF = 1600/1400
									M.W. 8.5# VIS 27
									191 GPM PUMP RATE / NO AIR
									FORQUE ON/OFF = 3200/1500 NOV-ONLINE
4									HOLE CONDITION = PARTIAL RETURNS
									I' HIGH .75' RIGHT OF LINE
	6:30	- 8:30	2.00	DRLSUR	05	C	P		SLID 270' / 10% CIRCULATE FOR CASING
	8:30	- 12:30	4.00	DRLSUR	06	Α.	P		
A 2 11			,,,,,	21120011		•	•		LDDS, BHA & DIRECTIONAL TOOLS (SPOT MUD @ 1700' AND AT COLLARS)
·	12:30	- 13:30	1.00	DRLSUR	12	Α	Р		MOVE PIPE RACKS AND CATWALK. PULL
									DIVERTER HEAD. RIG UP TO RUN CSG. MOVE CSG
									NTO POSITION TO P/U. LOAD TRUCKS WITH DRILL
. *	13:30	- 16:30	3.00	DRLSUR	12	С	P		PIPE FOR INSPECTION.  TIH 60 JOINTS 8 5/8", 28#, J55 CASING SHOE IS AT
									2649.6' BAFFLE IS AT 2605.4'
	16:30	- 17:00	0.50	DRLSUR	12	В	P	ŀ	HOLD SAFETY MEETING PUMP ON CASING RUN
									200' OF 1". RIG DOWN RIG MOVE OFF WELL, RIG
	17:00	- 18:00	1.00	CSGSUR	12	Ē	P		JP CEMENT TRUCKS, AND CEMENT HEAD.
2 - 3		10.00	1.00	OCCOON	12	la.	•		RIG UP PRO PETRO PUMP TRUCK , LOAD PLUG TEST LINES TO 2000 PSI. PUMP 155 BBLS WATER
									OLLOWED BY 20 BBLS GEL WATER FLUSH
									FOLLOWED BY LEAD = 280SX CLASS G CMT @
No.									12# 2.86 YIELD. FOLLOWED BY 166SX 15.8# 1.15 YIELD. DROP PLUG & DISPLACE W/ 162.6 BBLS
, i									WATER. PLUG DOWN @ 17:27 09/10/2012 BUMP
									PLUG @ 900 PSI - FINAL LIFT = 700 PSI. FLOAT
									DIDN'T HOLD, SHUT IN UNDER PRESSURE, FULL
									RETURNS THROUGH OUT JÖB, PUMP 150 SX 15.8# CMT W/4% CALCIUM DOWN 1", 30BBLS CEMENT TO
									SURFACE. CEMENT FELL BACK
	19:00	- 19:00	0.00	CSGSUR	12	E	Р		NOC, PUMP TOP OUT #2 W/ 90SX CLASS G CMT @
									15.8 WT & 1.15 YIELD + 4% CACL / CMT TO
9/27/2012	8:30	- 10:00	1.50	MIRU3	01	Ċ	P		SURFACE, RELEASE RIG @ 19:00 SKID RIG 20' TO MS 921-36J1CS,ALIGN OVER WELL
	10:00	- 12:00	2.00	PRPSPD	14	A	P		NIPPLE UP BOPE,RIG UP AFTER SKID
	12:00	- 17:00	5.00	PRPSPD	15	Α	Р		PRESSURE TEST CASING 1,500 HIGH 250 LOW
									FOR 30 MIN / PRESSURE TEST H&P EQUIP BLIND
									RAMS, PIPE RAMS, FLOOR VALVE, KILL LINES &
									KILL LINE VALVES, BOP WING VALVES , HCR VALVE + CHOKE LINE; INNER AND OUTER CHOKE
									VALVE + CHOKE LINE, INNER AND OUTER CHOKE VALVES & MANIFOLD TO 250 PSI LOW @ 5
									MINUTES + 5000 PSI HIGH @ 10 MINUTES / TEST
									ANNULAR TO 250 PSI LOW @ 5 MINUTES + 2,500
	17:00	- 17:30	0.50	PRPSPD	14	В	Р		PSI HIGH NSTALL WEAR BUSHING & SMITH BEARING ASSY
· · · ·		- 18:30	1.00	PRPSPD	15	A	Р		TEST MI SWACO PRESSURE CONTROL EQUIPMENT
									TO 1,000 PSI

2/6/2013 4:33:36PM

### US ROCKIES REGION ...

## Operation Summary Report

					upera	uon S	umma	ry Report	
Well: MORGAN S	STATE 9	21-36J1CS	GREEN					Spud Date: 9/9/2	2012
Project: UTAH-UI	INTAH			Site: MOF	RGAN ST	ATE 921	-36J PAD		Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING	;			Start Date	e: 8/16/20	12			End Date: 10/4/2012
Active Datum: Rh Level)	⟨B @5,0	79.00usft (a	above Mean Se	ea	UWI: NW/SE/0/9/S/2			3/0/0/26/PM/S/211	8/E/0/1784/0/0
Date	. √St	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	r MD From (usft)	Operation :
	18:30	- 21:00	2.50	PRPSPD	06	A	P		PICK UP MUD MTR,BIT, DIRECTIONAL BHA WITH WEATHERFORD SCRIBE ,ORIENTATE, TEST SAME TIH TAG @ 2,575,FILL PIPE
	21:00	- 22:00	1.00	PRPSPD	07	В	Р		LEVEL DERRICK, INSTALL ROTATING HEAD, PRE SPUD INSP
, and the second	22:00	- 23:00	1.00	DRLPRC	02	F	P		DRILL CEMENT & SHOE TRACK FROM 2,575' BAFFLE@ ,2,650 SHOE@ 2,670 RAT HOLE TO
4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									2,705'
		- 0:00	1.00	DRLPRC	02	В	P		DRILL /SLIDE / SURVEY/ F/ 2,705-2,805 = 100' @100 FPH WOB 18,000-24,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM 117 PUMPS 110 SPM= 495 GPM PUMP PRESSURE ON/OFF BTM 1,650//1,400 TORQUE ON/OFF BTM 6,000/ 2,000 PICK UP WT 104,000 SLACK OFF WT 88,000 ROT WT 95,000 SLIDE 165' IN 165 MIN 14.4 % OF FOOTAGE DRILLED, 28.9 %OF HRS DRILLED 0 BBLS FLUID LOST MUD WT 8.4 VIS 27, PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ 3-4% SAWDUST NOV-D WATER SWACO OFF LINE
9/28/2012	0:00	- 6:00	6.00	DRLPRC	02	B	P		DRILL /SLIDE / SURVEY/ F/ 2,805-3,625 = 820' @136.6 FPH WOB 18,000-24,000 TOP DRIVE RPM 40-75
									MUD MOTOR RPM 90 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 1800//1,525 TORQUE ON/OFF BTM 8,000/ 4,000
									PICK UP WT 130,000 SLACK OFF WT 120,000 ROT WT 105,000 SLIDE 48' IN 35 MIN 5.8 % OF FOOTAGE DRILLED, 9.7 %OF HRS DRILLED
1 × 2									0 BBLS FLUID LOST MUD WT 8.4 VIS 27,

2/6/2013 4:33:36PM

PUMPING 5-10 BBL SWEEPS EVERY STAND,W/

3-4% SAWDUST NOV-D WATER SWACO OFF LINE

Well: MORGAN STATE 921-36J1CS	GREEN	consecutive contraction	CONTRACTOR OF STATE		Spud Date: 9/	/9/2012	
Project: UTAH-UINTAH	·	Site: MOR	CAN ST	ATE 921-3	· · · · · · · · · · · · · · · · · · ·		
					DOJ PAD	Rig Name No: PROPETRO 11/11, H&P 298/298	
Event: DRILLING		Start Date:				End Date: 10/4/2012	
Active Datum: RKB @5,079,00usft (a Level)	bove Mean Sea		UWI: NV	N/SE/0/9/S	S/21/E/36/0/0/26/PM/S/2	2118/E/0/1784/0/0	
A V.	drugara, an albasi.	1222	**************************************	304.000 NO 10			
Date Time	Duration F	hase .	Code	Sub Code	P/U MD From (usft)	Operation P	
6:00 - 13:00		RLPRV	02	B	P	DRILL /SLIDE / SURVEY/ F/ 3,625-4,702 = 1077"	
						@153.8	
						WOB 18,000-24,000	
						TOP DRIVE RPM 40-75	
						MUD MOTOR RPM 90	
						PUMPS 124 SPM= 558 GPM	
						PUMP PRESSURE ON/OFF BTM 2,000//1730	
						TORQUE ON/OFF BTM 8,000/ 6,000	
						PICK UP WT 138,000	
						SLACK OFF WT 100,000	
						ROT WT 124,000	
						SLÍDE 28' IN 25 MIN 2.8 % OF FOOTAGE DRILLED,	
						.5.9 %OF HRS DRILLED	
						100 BBLS FLUID LOST	
						MUD WT 8.5 VIS 27,	
						PUMPING 5-10 BBL 9.5# SWEEPS EVERY STAND,W	
						ANCO FIBER ,CALCIUM CARBONATE,MAXI SEAL	
						,SAWDUST LCM 4-5%	
						NOV-D WATER	
13:00 - 14:30	1.50 DF	RLPRV	06	J	Р	SWACO OFF LINE	
74.00	1.50	(LI IV	00	J	r	TRIP OUT TO 1,960" TO PICK UP GHOST REAMER /	
14:30 - 15:00	0.50 DF	RLPRV	07	Α	Р	HOLE GOOD DAILY RIG SERVICE	
15:00 - 16:00		RLPRV	06	J	Р		
16:00 - 0:00						TRIP IN HOLE, WASH 85' TO BTM , NO FILL	
10.00 - 0,00	8.00 DF	RLPRV	02	В	P	DRILL /SLIDE / SURVEY/ F/ 4,702-5,820 = 1,118"	
						@139.75	
						WOB 18,000-24,000	
						TOP DRIVE RPM 40-75	
						MUD MOTOR RPM 90	
						PUMPS 124 SPM= 558 GPM	
						PUMP PRESSURE ON/OFF BTM 2,225/1,970	
						TORQUE ON/OFF BTM 10,000/ 6,000 PICK UP WT 160,000	
						SLACK OFF WT 122,000	
						ROT WT 140,000	
						SLIDE 20' IN 15 MIN 1.8 % OF FOOTAGE DRILLED, .3	
						%OF HRS DRILLED	
						75 BBLS FLUID LOST	
						MUD WT 8.5 VIS 27,	
						PUMPING 5-10 BBL 9.5# SWEEPS EVERY STAND,W/	
						ANCO FIBER ,CALCIUM CARBONATE,MAXI SEAL	
						,SAWDUST LCM 4-5%	
						NOV-D WATER	
						SWACO OFF LINE	

2/6/2013

4:33:36PM

Well: MORGA	N STATE 9	21-36J1CS	GREEN			Spud Date: 9/9/2012						
Project: UTAH-UINTAH Site: MOF						TATE 921	-36J PAE		Rig Name No: PROPETRO 11/11, H&P 298/298			
Event: DRILLING Start Date					e: 8/16/2012				End Date: 10/4/2012			
Active Datum: RKB @5,079.00usft (above Mean Sea					r —		/S/21/E/3	6/0/0/26/PM/S/2	2118/E/0/1784/0/0			
Level)		_										
Date -	St	Time art-End	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation (Fig. 1)			
9/29/2012	0:00	- 6:00	6.00	DRLPRV	02	B	P		DRILL /SLIDE / SURVEY/ F/ 5,820-6,505 = 685' @114			
									FPH			
									WOB 20,000-24,000			
									TOP DRIVE RPM 50-75			
									MUD MOTOR RPM 90			
									PUMPS 124 SPM= 558 GPM			
									PUMP PRESSURE ON/OFF BTM 2,275//1,975			
									TORQUE ON/OFF BTM 11,000/ 7,000			
									PICK UP WT 178,000			
		1							SLACK OFF WT 130,000			
									ROT WT 152,000			
									SLIDE 20' IN 30 MIN 2.9 % OF FOOTAGE DRILLED,			
									8.3 %OF HRS DRILLED			
									60 BBLS FLUID LOST WHILE DRILLING			
									MUD WT 8.5 VIS 27,			
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/			
									ANCO FIBER, MAXI SEAL			
									CALCIUM CARB, SAWDUST 4-5%			
									NOV-D WATER			
	6:00	- 14:20	0.50	יים ספויי	00	-	Б		SWACO OFF LINE			
	0.00	- 14:30	8.50	DRLPRV	02	В	Р		DRILL /SLIDE / SURVEY/ F/ 6,505-7,261 = 756 @88.9 FPH			
									WOB 20,000-28,000			
									TOP DRIVE RPM 40-75			
									MUD MOTOR RPM 85			
									PUMPS 118 SPM= 531 GPM			
									PUMP PRESSURE ON/OFF BTM 2,050//1,880			
									TORQUE ON/OFF BTM 9,000/ 7,000			
									PICK UP WT 190,000			
									SLACK OFF WT 148,000			
									ROT WT 164,000			
									SLIDE 15' IN 30 MIN .2 % OF FOOTAGE DRILLED, 5.8			
									%OF HRS DRILLED			
									130 BBLS FLUID LOST WHILE DRILLING			
									MUD WT 8.5 VIS 27,			
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/			
									ANCO FIBER, MAXI SEAL			
									CALCIUM CARB, SAWDUST 4-5%			
									NOV-D WATER			
									SWACO OFF LINE			
	14:50	45.00	ā ÷ a	66, 55.			_		LIGHT MUD UP @7,250'			
	14.50	- 15:00	0.50	DRLPRV	07	Α	P		DAILY RIG SERVICE			

Well: MORGAN	STATE 921-36	SJ1CS GF	REEN			Spud Date: 9/9/2012						
Project: UTAH-UINTAH Site: MOR Event: DRILLING Start Date					RGAN ST	ATE 921	-36J PAD		Rig Name No: PROPETRO 11/11, H&P 298/298			
					e: 8/16/2012				End Date: 10/4/2012			
Active Datum: RKB @5,079.00usft (above Mean Sea Level)							/S/21/E/36	/0/0/26/PM/S/211				
) Date	Time		Duration -	Phase	Code	Sub	P/U	MD From	Operation			
#T#1515174.54	15:00 - 0	ALC: CARROLL SERVICE OF	9.00	DRLPRV	02	B		(usft)	DRILL /SLIDE / SURVEY/ F/ 7,261-8,000 = 739			
									@82.1 FPH			
									WOB 20,000-28,000			
									TOP DRIVE RPM 40-75			
									MUD MOTOR RPM 85			
									PUMPS 120 SPM= 550 GPM			
									PUMP PRESSURE ON/OFF BTM 2,450//2,225			
									TORQUE ON/OFF BTM 12,000/ 9,000			
									PICK UP WT 206,000			
									SLACK OFF WT 148,000			
									ROT WT 173,000			
									SLIDE 10' IN 15 MIN .2 % OF FOOTAGE DRILLED, 5.8			
									%OF HRS DRILLED			
									15 BBLS FLUID LOST WHILE DRILLING			
									MUD WT 8.8 VIS 34			
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/			
									ANCO FIBER, MAXI SEAL			
									CALCIUM CARB, SAWDUST 4-5% NOV-D WATER			
									SWACO OFF LINE			
									NO FLARE			
9/30/2012	0:00 - 6	:00	6.00	DRLPRV	02	В	Р					
	_				-		•		DRILL / SURVEY/ F/ 8,000-8,475= 475' @79.1 FPH WOB 20,000-28,000			
									TOP DRIVE RPM 40-75			
									MUD MOTOR RPM -85-90			
									PUMPS 120 SPM= 540 GPM			
									PUMP PRESSURE ON/OFF BTM 2,400//2,125			
									TORQUE ON/OFF BTM 12,000/ 9,000			
									PICK UP WT 210,000			
									SLACK OFF WT 160,000			
									ROT WT 180,000			
									NO SLIDES			
									42 BBLS FLUID LOST WHILE DRILLING			
									MUD WT 8.8 VIS 34,			
									PUMPING 5-10 BBL SWEEPS EVERY STAND,W/			
									ANCO FIBER,MAXI SEAL			
									CALCIUM CARB,3-4% SAWDUST			
									NOV-D WATER			
									SWACO OFF LINE			

2/6/2013 4:33:36PM

## Operation Summary Report

	STATE 921-36J1CS G			** ***********************************			Spud Date: 9/9/2	012				
Project: UTAH-U	Site: MOR	GAN ST	ATE 921-	36J PAD		Rig Name No: PROPETRO 11/11, H&P 298/298						
Event: DRILLING	Start Date	: 8/16/20	12			End Date: 10/4/2012						
	Active Datum: RKB @5,079.00usft (above Mean Sea					UWI: NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0						
Level)	of weareness and an experience of											
Date	Time :	Duration (hr)	Phase	Code	Sub Code	P/U	MD From (usft)	Operation				
	6:00 - 14:30 14:30 - 15:00		DRLPRV	02	В	P		DRILL /SLIDE / SURVEY/ F/ 8,475-9,056= 581' @68.3 FPH WOB 20,000-28,000 TOP DRIVE RPM 40-75 MUD MOTOR RPM -85-90 PUMPS 124 SPM= 558 GPM PUMP PRESSURE ON/OFF BTM 2,575//2,310 TORQUE ON/OFF BTM 12,000/ 10,000 PICK UP WT 223,000 SLACK OFF WT 173,000 ROT WT 191,000 SLIDE 15' IN 30 MIN .2.5 % OF FOOTAGE DRILLED, 5.8 %OF HRS DRILLED 0 BBLS FLUID LOST WHILE DRILLING MUD WT 8.9 VIS 34, PUMPING 5-10 BBL SWEEPS EVERY STAND,W/ ANCO FIBER,MAXI SEAL CALCIUM CARB,3-4% SAWDUST NOV-D WATER SWACO OFF LINE 5-10' FLARE				
	15:00 - 0:00		DRLPRV DRLPRV	07 02	В	PP		DAILY RIG SERVICE  DRILL / SURVEY/ F/ 9,056-9,615=559" @62.1 FPH  WOB 20,000-28,000  TOP DRIVE RPM 40-75  MUD MOTOR RPM -85-90  PUMPS 110 SPM= 495 GPM  PUMP PRESSURE ON/OFF BTM 2,350//2,075  TORQUE ON/OFF BTM 12,000/ 10,000  PICK UP WT 238,000  SLACK OFF WT 172,000  ROT WT 201,000  NO SLIDES  0 BBLS FLUID LOST WHILE DRILLING  MUD WT 8.9 VIS 34,  PUMPING 5-10 BBL SWEEPS EVERY STAND,W/  ANCO FIBER,MAXI SEAL  CALCIUM CARB,3-4% SAWDUST  NOV-CONTENTIONAL  SWACO ON LINE 9,433 ANN PRESSURE 157 10-15'  FLARE				

### ∷ Operation Summary Report

		Opera	tion St	ımmary Report				
Well: MORGAN STATE 921-36J1CS GREEN				Spud Date: 9/9/2	2012			
Project: UTAH-UINTAH	Site: MOF	RGAN STA	ATE 921-3	6J PAD	Rig Name No: PROPETRO 11/11, H&P 298/298			
Event: DRILLING	Start Date	e: 8/16/20°	12		End Date: 10/4/2012			
Active Datum: RKB @5,079.00usft (above Mean Sea	_	UWI: NV	V/SE/0/9/S	6/21/E/36/0/0/26/PM/S/211	8/E/0/1784/0/0			
Level)								
Date Time Duration Start-End (hr)	Phase	Code	Sub Code	P/U MD From	Operation			
10/1/2012 0:00 - 6:00 6.00 [	DRLPRV	02	В	Р	DRILL / SURVEY/ F/ 9,615-9,850= 235' @39.1 FPH			
					WOB 20,000-30,000			
					TOP DRIVE RPM 40-75 MUD MOTOR RPM -80			
					PUMPS 110 SPM=495 GPM			
					PUMP PRESSURE ON/OFF BTM 2,525//2,370			
					TORQUE ON/OFF BTM 12,000/ 10,000			
					PICK UP WT 226,000			
					SLACK OFF WT 174,000			
					ROT WT 200,000			
					NO SLIDES			
					0 BBLS FLUID LOST WHILE DRILLING MUD WT 8.9 VIS 34,			
					PUMPING 5-10 BBL SWEEPS EVERY STAND.W/			
					ANCO FIBER,MAXI SEAL			
					CALCIUM CARB,3-4% SAWDUST			
					NOV- CONVENTIONAL			
					SWACO ON LINE ***WATER FLOW***-			
					WATER FLOW @ 9,650' ANN PRESSURE TO 400			
0.00				_	PSI,EQUIV MW 10.2			
6:00 - 18:00 12.00 I	DRLPRV	02	В	P	DRILL / SURVEY/ F/ 9,850-10,270=420 @35 FPH			
					WOB 20,000-30,000			
					TOP DRIVE RPM 40-75 MUD MOTOR RPM -80			
					PUMPS 105 SPM=472 GPM			
:					PUMP PRESSURE ON/OFF BTM 2,700//2,500			
					TORQUE ON/OFF BTM 11,000/ 8,000			
					PICK UP WT 236,000			
					SLACK OFF WT 182,000			
1					ROT WT 208,000 NO SLIDES			
					0 BBLS FLUID LOST WHILE DRILLING			
					10,050 DISPLACE HOLE W/ 10.4 # MUD			
					MUD WT 11.0 VIS 38 LCM 3-4%,			
					NOV- OFF LINE			
18:00 - 18:30 0.50 [	ORLPRV	07	Α	Р	SWACO OFF LINE DAILY RIG SERVICE			
	DRLPRV	02	B		DRILL / SURVEY/ F/ 10,270-10,470=200 @35 FPH			
			_	•	WOB 20,000-30,000			
					TOP DRIVE RPM 40-75			
					MUD MOTOR RPM -80			
					PUMPS 105 SPM=472 GPM			
					PUMP PRESSURE ON/OFF BTM 2,700//2,500			
					TORQUE ON/OFF BTM 10,000/ 9,000 PICK UP WT 234,000			
					SLACK OFF WT 182,000			
					ROT WT 205,000			
					NO SLIDES			
					0 BBLS FLUID LOST WHILE DRILLING			
					MUD WT 11.3 VIS 38 3+4% LCM			
					NOV- OFF LINE SWACO OFF LINE			
		•		· · · · · · · · · · · · · · · · · · ·	OWNED OIT LINE			

# Operation Summary Report

Well: MORGAN STATE 921-36J1CS GREEN		pud Date: 9/9/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36J PAD	Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLING	Start Date: 8/16/2012	End Date: 10/4/2012
Active Datum: RKB @5,079.00usft (above Mean	Sea UWI: NW/SE/0/9/S/21/E/36/0/	0/26/PM/S/2118/E/0/1784/0/0
l evel\		

Event: DRILLING Start Dat  Active Datum: RKB @5,079.00usft (above Mean Sea						e: 8/16/2012   UWI: NW/SE/0/9/S/21/E/36/0/0/26/PM/S/211			End Date: 10/4/2012 18/E/0/1784/0/0	
Date 3	E WEET	Time i	Duration	∄ Phase □	Code ,	Sub	P/U	MD From	Operation	
al berie	A TOTAL STREET	tart-End	(hr)			Code		(usft)		
10/2/2012	0:00	- 2:00	2.00	DRLPRV	02	B	P		F/ 10,470-10,532= 62' @31 FPH	
						_	•	WOB 20,000-30,0	The state of the s	
								TOP DRIVE RPM		
								MUD MOTOR RE		
								PUMPS 105 SPM		
									RE ON/OFF BTM 2,525//2,370	
									F BTM 12.000/ 10.000	
								PICK UP WT 234	, , , , , , , , , , , , , , , , , , , ,	
								SLACK OFF WT	•	
								ROT WT 208,000		
								NO SLIDES		
									OST SEEPAGE WHILE DRILLING	
								MUD WT 11.3 VI		
								NOV- OFF LINE		
								SWACO OFF LIN	ie	
								NO FLARE		
	2:00	- 3:00	1.00	DRLPRV	22	М	Х	LOST CIRC PUN	MP 15% LCM SWEEPS LOST 170	
									ARTICAL RETURNS LOST 120	
								BBLS BUILD VO	L WORK PIPE,CIRC W/ FULL	
								RETURNS MW 1	1.3 / 10% LCM *** LOST	
								CIRCULATION **	**	
**	3:00	- 3:30	0.50	DRLPRV	02	В	Р	DRILL F/ 10,532	TÖ 10,550 TD ,10 BBL MUD LOSS	
	3:30	- 5:30	2.00	DRLPRV	05	В	Р		RIP TO CASING SHOE / MUD WT TO	
								11.8	THE PROPERTY OF THE PARTY OF TH	
	5:30	- 5:30	0.00	DRLPRV						
	5:30	- 9:30	4.00	DRLPRV	06	Ε	P	TRIP OUT TO CA	ASING SHOE PULLED 30,000 OVER	
						_	•		OF TRIP NO TIGHT SPOTS, HOLE	
									FLUID,FLOW CHECK@ CASING	
								SHOE	LOID, LOW CHECK @ CASING	
	9:30	- 15:00	5.50	DRLPRV	06	Е	P		OLE,PRECAUTIONARY,WASH AND	
							•		00TO 5,500,REAM THRU TIGHT	
									5,840-48 ,5,874-76, WASH 75' TO	
								BTM 10' FILL	,5,540-46 ,5,674-76, WASH 75 TO	
	15:00	- 16:30	1.50	DRLPRV	05	С		CCH F/ OPEN HO	DIFLOGS	
		- 19:30	3.00	DRLPRV	06	E	X			
		, 0.00	0.00	DILLITO	00	_	^		10 STANDS, UNABLE TO PUMP	
	19:30	- 0:00	4.50	DRLPRV	06	В	Р	THROUGH DRIL		
		5.55	-F.00	שונבו ווע	50	J	'		DLE ( WET) FOR OPEN HOLE	
10/3/2012	0:00	- 3:00	3.00	EVALPR	06	В	Р	LOGS,DISPLACE		
10/0/2012	2.00	3.00	0.00	EVALEK	UO	D	r		DISPLACE W/ 12.5# MUD,FLOW	
									NG SHOE, LAY DOWN GHOST	
									SHA, FOUND EMITTER & MWD TOOL	
									ITH CLAY,BARITE & LCM FROM	
	3:00	- 9:00	6.00	EVALPR	11	G	Р		BREAK BIT LID MUD MOTOR	
		0.00	0.00	EVALUATION OF THE PROPERTY OF		J	•		LLIBURTON RUN TRIPLE COMBO	
									536, DRILLER TD 10,536, LOG OUT	
	9:00	- 10:00	1.00	CSGPRO	14	B	P	TO SURFACE,RI		
		10,00	1.00	SOUFING	17	ט	Г		ARING ASSEMBLY, INSTALL CASING	
									D HOUSING, PULL WEAR	
*	10:00	- 11:00	1.00	CSGPRO	12	Δ	P	BUSHING,X/O BA		
	. 5.55	1 1.00	1.00	COGFRO	14	Α	Г	CIJSA RIG UP F	RANKS CASING EQUIP	

2/6/2013

### Operation Summary Report

Well: MORGAN	STATE 9	21-36J1CS (	GREEN					Spud Date: 9/9/2012
Project: UTAH-l	JINTAH			Site: MOF	RGAN ST	ATE 921	-36 <b>J</b> PAD	Rig Name No: PROPETRO 11/11, H&P 298/298
Event: DRILLIN	G			Start Date	e: 8/16/20	12		End Date: 10/4/2012
Active Datum: F Level)	RKB @5,0	79.00usft (at	ove Mean S	Sea	UWI: N\	<b>N</b> /SE/0/9	/S/21/E/3	/0/0/26/PM/S/2118/E/0/1784/0/0
Date	St	Time art-End	Duration (hr)	Phase #	:Code	Sub Code	P/U	MD From Operation (usft)
	11:00	- 19:30	8.50	CSGPRO	12	С	Р	MAKE UP FLOAT EQUIP,RIH TEST SAME,RUN 125 JTS I-80 11.6# LTC 4.5 CASING +1 CROSSOVER LTC/ DQX 115 JTS I-80 11.6# DQX 4.5 CASING+ RELATED TOOLS / BREAKING CIRCULATION @ SELECTED INTERVALS / LANDING CASING MANDREL IN BOWL W/ 110,000, @ 10,540 FOR CIRC & CEMENTING / SHOE @10,540 / FC @ 10,491 /BH MKR 9,958 MV MKR @ 7,319 X/0 @ 5,034 ,RD SAME
	19:30	- 21:00	1,50	CSGPRŌ	05	D	P	CIRC CASING BTMS UP 15' FLARE RD FRANKS / CT-JSA WITH BJ
		- 0:00	3.00	CSGPRO	12	E	P	INSTALL BJ CMT HEAD, TEST PUMP & LINES TO 5,000 PSI, ,DROP BOTTOM PLUG PUMP 25 BBLS FW PUMP 545 SKS LEAD CEMENT @ 12.5 PPG, (192 BBLS) (PREM LITE II + .0.25 pps CELLO FLAKE + .5 pps KOL SEAL + .05 lb/sx STATIC FREE + 6% bwoc BENTONITE + .2% bwoc SODIUM META SILICATE + 0.2 % R-3 +0.4%bwoc FL-52 .6% FRESH WATER / (10.44 gal/sx, 1.98 yield) + 1,710 SX TAIL @ 14.3 ppg(402 BBLS) + (CLS G 50/50 POZ + 10% SALT + .005llbs/sx STATIC FREE + .2% R3 + .002 GPS FP-6L + 2% BENTONITE +0.5%EC-1+ 58.9% FW / (5.94 gal/sx, 1.32 yield) WASH PUMP & LINES DROP TOP PLUG & DISPLACE W/ 163 BBLS H2O + ADDITIVES / PLUG DOWN @23:47 HOURS / FLOATS HELD W/ 2 BBLS H2O RETURNED TO INVENTORY/ / LIFT PRESSURE @ 2,977 PSI BUMP PRESSURE @3,614 / LOST RETURNS @ 155 BBLS IN DISPLACEMENT W/ 5 BBLS WATER SPACER TO SURFACE /TOP OF TAIL CEMENT CALCULATED @ 4,125' / RIG DOWN BJ
10/4/2012	0:00	- 2:00	2.00	CSGPRO	12	E	P	FLUSH STACK / SET PACK OFF L/D SETTING TOOL, REMOVE CASING BAILS & ELEVATORS
	2:00	- 3:30	1.50	RDMO	14	Α	Р	CT-JSA NIPPLE DOWN BOPE / PREP FOR SKID / RELEASE RIG TO MORGAN STATE 921-36G4CS@03:30 HRS 10/04/2012

2/6/2013

#### 1 General

#### 1.1 Customer Information

Company	US ROCKIES REGION
Representative	
Address	

#### 1.2 Well/Wellbore Information

Well	MORGAN STATE 921-36J1CS GREEN	Wellbore No.	ОН
Well Name	MORGAN STATE 921-36J1CS	Wellbore Name	MORGAN STATE 921-36J1CS
Report No.	1	Report Date	1/4/2013
Project	UTAH-UINTAH	Site	MORGAN STATE 921-36J PAD
Rig Name/No.		Event	COMPLETION
Start Date	1/4/2013	End Date	1/23/2013
Spud Date	9/9/2012	Active Datum	RKB @5,079.00usft (above Mean Sea Level)
UWI	NW/SE/0/9/S/21/E/36/0/0/26/PM/S/2118/E/0/1784/0/0		

#### 1.3 General

Contractor	Job Method	Supervisor	
Perforated Assembly	Conveyed Method		

1.5

Summary

#### 1.4 Initial Conditions

Fluid Type		Fluid Density	Gross interval	7,330.0 (usft)-10,370.0 (us	Start Date/Time	12/31/2012 12:00AM
Surface Press		Estimate Res Press	No. of intervals	72	End Date/Time	12/31/2012 12:00AM
TVD Fluid Top		Fluid Head	Total Shots	231	Net Perforation Interval	77.00 (usft)
Hydrostatic Press		Press Difference	Avg Shot Density	3.00 (shot/ft)	Final Surface Pressure	
Balance Cond	NEUTRAL				Final Press Date	

#### 2 Intervals

#### 2.1 Perforated Interval

Date	Reservoir (usft)	CCL-Ti MD Top S (usft)	(usft)	Shot Density (shot/ft)	Misfires/j Diamete Add. Shot ri (in)	Ca	rr Type /Stage No.	Carri Size (in)	Phasing	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201	MESAVERDE/	7,330.0	7,331.0	3.00	0.36	0 EXP	,	3.375	120.00		23.00	PRODUCTIO	
2							-				and or a constant of the const	N	
12:00AM				de la							With the second		

Date	Formation/i Reservoir	CCL@ (usft)	CCL-Ti S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r: (in)	Carr Type /Stage No.	Carr Size (in)	Phasing (*)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201 2 12:00AM	MESAVERDE/		of distance of the second	7,366.0	7,367.0				EXP/	3.375	120.00			PRODUCTIO N	7 7 70   30 15
	MESAVERDE/	-	THE CONTRACT AND ADDRESS OF TH	7,446.0	7,447.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			7,472.0	7,473.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			7,490.0	7,491.0	3.00	A 100	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/		III III III III III III III III III II	7,496.0	7,497.0	3.00		0.360	EXP/	3.375	120.00	V V V V V V V V V V V V V V V V V V V	23.00	PRODUCTIO N	10 mm
	MESAVERDE/	A STATE OF THE STA	The second section is a second section of the second section of the second section is a second section of the second section of the second section is a second section of the s	7,520.0	7,522.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	THE PROPERTY OF THE PROPERTY O	MANAGEMENT TO ANGLE AND ANGLE ANGLE AND ANGLE ANGL	7,555.0	7,556.0	3.00		0.360	EXP/	3.375	120.00		1	PRODUCTIO N	
	MESAVERDE/	WHO DESCRIPTION WHILE AND ADDRESS OF THE PARTY OF THE PAR		7,568.0	7,569.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			7,603.0	7,604.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			7,636.0	7,637.0	3.00	1000	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			7,662.0	7,663.0	3.00	A parameter of the second of t	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	***************************************		7,673.0	7,674.0	3.00		0.360	EXP/	3.375	120.00		- 1	PRODUCTIO N	
	MESAVERDE/			7,711.0	7,712.0	3.00	The state of the state of the state of	0.360	EXP/	3.375	120.00		1	PRODUCTIO N	MIN COLUMN TO THE PARTY OF THE
	MESAVERDE/	111111111111111111111111111111111111111		7,724.0	7,725.0	3.00		0.360	EXP/	3.375	120.00		1	PRODUCTIO N	

Date	Formation/i Reservoir	CCL@ (usft)	CCL-Ti S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/i Diam Add. Shot r		Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201 2 12:00AM	MESAVERDE/		2	7,804.0	7,805.0			360 EX	<b>P</b> /	3.375	120,00			PRODUCTIO N	×5 15.
·	MESAVERDE/		THE STREET STREET, STR	7,846.0	7,847.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			7,944.0	7,945.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	dely different learning and the second		7,972.0	7,973.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/		N. Company	7,992.0	7,993.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,007.0	8,008.0	3.00	0.	360 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	V V V V V V V V V V V V V V V V V V V		8,036.0	8,038.0	3.00	0,	860 EX	Pl	3.375	120.00		23.00	PRODUCTIO N	TOTAL CONTRACTOR OF THE PARTY O
*** ***********************************	MESAVERDE/			8,070.0	8,071.0	3.00	0.3	860 EX	P/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			8,084.0	8,085.0	3.00	0.:	860 EXI	PI	3.375	120.00		23.00	PRODUCTIO N	The state of the s
12/31/201 2 12:00AM	MESAVERDE/			8,185.0	8,186.0	3.00	0.3	60 EX	P/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/	A PAPARA DE LA PARA DEPARA DE LA PARA DE LA		8,196.0	8,197.0	3.00	0.3	60 EX	9/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	A A A A A A A A A A A A A A A A A A A		8,270.0	8,271.0	3.00	0.3	60 EX	P/	3.375	120.00			PRODUCTIO N	N et al de la constant de la constan
	MESAVERDE/	The state of the s		8,306.0	8,308.0	3.00	0.0	60 EXF	<b>)</b>	3.375	120.00		i	PRODUCTIO N	
	MESAVERDE/		111111111111111111111111111111111111111	8,373.0	8,374.0	3.00	0.3	60 EXF	<b>)</b>	3.375	120.00		1	PRODUCTIO N	

Date	Formation// Reservoir	CCL@ (usft)	CCL-Ti	MD Top (usft)	MD Base (usft)	Shot Density	Misfires/ I	Diamete'	Carr Type /Stage No	Carr. Size	Phasing	Charge Desc/Charge Manufacturer	Charge Weight	Reason	Misrum
		N. J. San	(usft)	\	,	(shot/ft)		(in):		(in)			(gram)	Strate St. Company	7 ( 14)
2	MESAVERDE/			8,417.0	8,418.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	The second secon
12:00AM	L														
2	MESAVERDE/		ANTALANA MANAGAMAN	8,456.0	8,457.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM				0 5040	0 525 0	2.00		0.200	EVDI	2 275	400.00		20.00	DDODUGTIO	-
2	MESAVERDE/	Att at the second secon		8,534.0	8,535.0	3.00	The property of the property o	0.360	EAP/	3.375	120.00			PRODUCTIO N	The state of the s
12:00AM				0.507.0	0.500.0			0.000	EVO	0.075	400.00	The Particular Control of the Contro	20.00	DDODUGTIO	
2	MESAVERDE/			8,567.0	8,568.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	######################################
12:00AM	NEO AVENDE			0 505 0	0 500 0	3.00		0.360	EVDI	0.075	400.00	TO THE WALLES AND A STREET OF THE STREET OF	00.00	DDODLIGTIC	
2	MESAVERDE/			8,585.0	8,586.0	3.00		0.360	EAP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM	MESAVERDE/			8,600.0	8,601.0	3.00	app.	0.360	EVD/	3.375	120.00		22.00	PRODUCTIO	
12:00AM	MESAVERDE/			0,000.0	0,001.0	3.00	mann e diverbibilità	0.360	EAP	3.373	120,00		23.00	N PRODUCTIO	
	MESAVERDE/	-		8,681.0	8,682.0	3.00		0.360	EYD/	3.375	120.00		23.00	PRODUCTIO	
2 12:00AM	INCOAVERDE/			0,001.0	0,002.0	5.00	Oceanococci de Angeles	0.500		3.373	120,00		25.00	N	
	MESAVERDE/			8,706.0	8,707.0	3.00	9	0.360	EXP/	3.375	120.00		23 00	PRODUCTIO	
2 12:00AM				-,,	-,		**************************************	1000						N	
12/31/201 2 12:00AM	MESAVERDE/			8,726.0	8,727.0	3.00		0.360	EXP/	3.375	120.00		i	PRODUCTIO N	
	MESAVERDE/			8,743.0	8,744.0	3.00		0.360	EXP/	3.375	120.00		- 1	PRODUCTIO N	
12:00AM				441		and the same of th			P T					••	
12/31/201 2	MESAVERDE/			8,757.0	8,758.0	3.00		0.360	EXP/	3.375	120.00		i	PRODUCTIO N	The state of the s
12:00AM			1	a sales of the sal											
12/31/201 2	MESAVERDE/	7.11	771	8,809.0	8,810.0	3.00	A commence of the commence of	0.360	EXP/	3.375	120.00			PRODUCTIO N	
12:00AM			11 11												
2	MESAVERDE/		D-HHHHHHhhrmitinesses	8,830.0	8,831.0	3.00	ARROPOLINA DE PARADA DE LA CALLADA DE LA CAL	0.360	EXP/	3.375	120.00		1	PRODUCTIO N	
12:00AM				4444											
12/31/201 2 12:00AM	MESAVERDE/			8,858.0	8,859.0	3.00	Total Carlot	0.360	EXP/	3.375	120.00	The state of the s	:	PRODUCTIO N	

Date	Formation/i Reservoir	CCL@ (usft)	CCL-T) S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/j Add_Shot	Diamete' ri (in)	Carr Type /Stage No.	Carr Size (in)	Phasing (°)	Charge Desc /Charge, Manufacturer	Charge Weight (gram)	Reason	Misrun
2	MESAVERDE/	and <u>1,000,000,000,000,000,000,000,000</u>	T MCOID	8,934.0	8,935.0		ACC Secretary Se		EXP/	3.375	120.00	and the second section of the second section of the second section of the second section of the second section		PRODUCTIO N	
12:00AM 12/31/201 2 12:00AM	MESAVERDE/			8,963.0	8,964.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/	A PART OF THE PART		8,987.0	8,988.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12/31/201 2	MESAVERDE/	A THE STATE OF THE		9,013.0	9,014.0	3.00	MAA AMADON 9999 AAAA AAAA AAAA AAAA AAAA AAAA AA	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	III I
2	MESAVERDE/	TITLE	HIII	9,037.0	9,038.0	3.00	7.00	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	CIAL PROPERTY AND ADMINISTRATION OF THE PROPERTY AN
2	MESAVERDE/		Address Addres	9,073.0	9,075.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
12:00AM 12/31/201 2 12:00AM	MESAVERDE/			9,144.0	9,145.0	3.00	-	0.360	EXP/	3.375	120.00			PRODUCTIO N	THE PROPERTY OF THE PROPERTY O
	MESAVERDE/		III MARIANI III Ali cili cili cili cili cili cili cili	9,162.0	9,163.0	3.00		0.360	EXP/	3.375	120,00		23.00	PRODUCTIO N	He de la constant de
	MESAVERDE/		110 Maria 11 11 11 11 11 11 11 11 11 11 11 11 11	9,184.0	9,185.0	3.00		0.360	EXP/	3.375	120.00	CANADA CANADA	23.00	PRODUCTIO N	
	MESAVERDE/		TO THE PARTY OF TH	9,197.0	9,198.0	3.00	To the state of th	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	A Commence of the Commence of	The state of the s	9,237.0	9,238.0	3.00	77	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/	1.0	THE STREET, AND ADDRESS.	9,258.0	9,259.0	3.00	or control of the con	0.360	EXP/	3.375	120.00		- 1	PRODUCTIO N	
	MESAVERDE/	497		9,286.0	9,287.0	3.00		0.360	EXP/	3.375	120.00		1	PRODUCTIO N	
	MESAVERDE/			9,318.0	9,319.0	3.00	an a	0.360	EXP/	3.375	120.00			PRODUCTIO N	

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrum
12/31/201 2 12:00AM	MESAVERDE/			10,050.0	10,051.0		1000		EXP/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/		The state of the s	10,059.0	10,060.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/		A Commence of the Commence of	10,075.0	10,076.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,091.0	10,092.0	3.00	77.7	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,105.0	10,107.0	3.00	Polymorphy and A polymo	0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,120.0	10,121.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	
	MESAVERDE/			10,125.0	10,126.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	And the second s
12/31/201 2 12:00AM	MESAVERDE/			10,152.0	10,153.0	3.00	and the second s	0.360	EXP/	3.375	120.00	·		PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/			10,170.0	10,171.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/	and and any and any and any and any		10,214.0	10,215.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	OCCUPATION AND ASSESSMENT OF A SECRETARY
12/31/201 2 12:00AM	MESAVERDE/			10,223.0	10,224.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
12/31/201 2 12:00AM	MESAVERDE/			10,238.0	10,239.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			10,243.0	10,244.0	3.00	- I	0.360	EXP/	3.375	120.00			PRODUCTIO N	
	MESAVERDE/			10,273.0	10,274.0	3.00		0.360	EXP/	3.375	120.00			PRODUCTIO N	

Date	Formation/ Reservoir	CCL@ (usft)	CCL-T S (usft)	MD Top (usft)	MD Base (usft)	Shot Density (shot/ft)	Misfires/ Add. Shot	Diamete r (in)	Carr Type /Stage No	Carr Size (in)	Phasing (°)	Charge Desc /Charge Manufacturer	Charge Weight (gram)	Reason	Misrun
12/31/201 2 12:00AM	MESAVERDE/			10,369.0	10,370.0	3.00		0.360	EXP/	3.375	120.00		23.00	PRODUCTIO N	

#### 3 Plots

#### 3.1 Wellbore Schematic



## US ROCKIES REGION ....

	Operation Summary Report									
Well: MORGAN	STATE 9	921-36J1CS (	GREEN		Spud Date: 9/9/20				012	
Project: UTAH-U	IINTAH			Site: MOF	RGAN ST	ATE 921	-36J PAD		Rig Name No: GWS 1/1	
Event: COMPLE	TION			Start Date	e: 1/4/201	3			End Date: 1/23/2013	
Active Datum: R	KB @5,0	79.00usft (ab	ove Mean Sea	1	UWI: N	N/SE/0/9	/S/21/E/36	6/0/0/26/PM/S/2118	JE/0/1784/0/0	
Level)	E We Yes	AND THE RESERVE	Anna mariner december 1	-to the territory was the to what the		I was a second				
Date	1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Time tart-End	Duration (hr)	Phase :	Code	Sub Code	P/U	MD From (usft)	Operation	
9/9/2012		-							* O TO STORY OF THE STORY OF TH	
9/10/2012		-								
1/4/2013	8:00 7:00	- 9:00 - 18:00	1.00	FRAC	33	С	Р	; ;	FILL SURFACE CSG. MIRU CAMERON QUICK TEST. 1ST PSI TEST T/ 9000 PSI. HELD FOR 15 MIN LOST 57 PSI. NO COMMUNICATION OR MIGRATION WITH SURFACE CSG BLEED OFF PSI. MOVE T/ NEXT WELL.SWIFN	
1/8/2013	7:00	- 18:00	11.00	FRAC	34		Р		PERF 1ST STAGE AS PER DESIGN.	
1/0/2013	7.50	- 16.00	11.00	FRAC	36	В	Р		FINISH SPOTTING IN EQUIPMENT AND R/U. PRESSURE TEST LINES GOOD @ 9500 PSI. PERF & FRAC FOLLOWING WELL AS PER DESIGN W/ 20/40 MESH TLC SAND (LOWER MESAVERDE) 30/50 MESH SAND (ALL OTHER STGS) & SLK WTR. ALL CBP'S ARE HALIBURTON 8K CBP'S.	
									FRAC STG 1) WHP 783 PSI, BRK 4098 PSI @ 5.2 BPM. ISIP 3092 PSI, FG .0.74, CALC PERFS OPEN @ 49.5 BPM @ 5556 PSI = 100% HOLES OPEN. 0 ISIP 3632 PSI, FG .0.79, NPI 540 PSI. 0 MP 8124 PSI, MR 51.4 BPM, AP 5639 PSI, AR 50.2 BPM, PUMPED 20/40 TLC SAND.	
									PERF STG #2] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=10,136', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.	
		, , , , , , , , , , , , , , , , , , ,						;	SWI. DRAIN EQUIP.	

	Operation Summary Repo	ort
Well: MORGAN STATE 921-36J1CS GREEN	Spud Date	e: 9/9/2012
Project: UTAH-UINTAH	Site: MORGAN STATE 921-36J PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date: 1/4/2013	End Date: 1/23/2013
Active Datum: RKB @5,079.00usft (above Mean Sea Level)		I/S/2118/E/0/1784/0/0
Date   Time   Duration	Phase         Code   Sub   P/U   MD From the control of the cont	
17072010 7.00 18.00 17.00	FIVAC SO B F	HSM, CONT PERF AND FRAC.
		FRAC STG 2) WHP 1827 PSI, BRK 3736 PSI @ 4.7 BPM. ISIP 2272 PSI, FG .0.66, CALC PERFS OPEN @ 50.6 BPM @ 5455 PSI = 88% HOLES OPEN. ISIP 3800 PSI, FG .0.82, NPI 1528 PSI. MP 8247 PSI, MR 51 BPM, AP 5331 PSI, AR 48.9 BPM, PUMPED 20/40 TLC SAND. (HAD TO CUT SAND EARLY, STAGE
		WAS SCREENING OUT.) PUMPED 70% OF DESIGNED VOLUME. SAND WAS @ 1# WHEN CUT.
		PERF STG #3] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9349', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		FRAC STG 3) WHP 949 PSI, BRK 2839 PSI @ 4.7 BPM. ISIP 1911 PSI, FG .0.65, CALC PERFS OPEN @ 39.4 BPM @ 5372 PSI = 63% HOLES OPEN. 0 ISIP 2786 PSI, FG .0.74, NPI 875 PSI. 0 MP 5993 PSI, MR 51.2 BPM, AP 4716 PSI, AR 50.5 BPM, PUMPED 30/50 OWATTA SAND. (NOTE: ALSO PUMPED 7000# 20/40 TLC AS PART OF VOLUME).
		PERF STG #4] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=9105', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		FRAC STG 4) WHP 1205 PSI, BRK 2849 PSI @ 4.7 BPM. ISIP 1888 PSI, FG .0.64, CALC PERFS OPEN @ 56.1 BPM @ 5608 PSI = 95% HOLES OPEN. 0 ISIP 2775 PSI, FG .0.75, NPI 887 PSI. 0 MP 5885 PSI, MR 56.2 BPM, AP 5208 PSI, AR 54.9 BPM, PUMPED 30/50 OWATTA SAND. (NOTE: ALSO PUMPED 5000# 20/40 TLC AS PART OF VOLUME).
		PERF STG #5] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8889', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		FRAC STG 5) WHP 1278 PSI, BRK 2345 PSI @ 4.7 BPM. ISIP 1821 PSI, FG .0.65, CALC PERFS OPEN @ 56.1 BPM @ 5154 PSI = 96% HOLES OPEN. 0 ISIP 2700 PSI, FG .0.75, NPI 879 PSI. 0 MP 5880 PSI, MR 56.4 BPM, AP 4962 PSI, AR 55.5 BPM, PUMPED 30/50 OWATTA SAND.
		PERF STG #6] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8631', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.
		SWFN. DRAIN EQUIP.

				rio T	Opera	ition S	umma	ary Report	
Well: MORGAN	STATE 9	21-36J1CS G	REEN		special sections and		10,000,000,000	Spud Date: 9/9	/2012
Project: UTAH-L	INTAH			Site: MOF	RGAN ST	ATE 921	-36J PAD		Rig Name No: GWS 1/1
Event: COMPLE	TION			Start Date	: 1/4/201	 13			End Date: 1/23/2013
Active Datum: R Level)	KB @5,07	79.00usft (ab	ove Mean Se	ea	UWI: N	W/SE/0/9	WSE/0/9/S/21/E/36/0/0/26/PM/		18/E/0/1784/0/0
Date	Alexander of the	Time	Duration (hr)	Phase	Code	Sub Code	. P/U	MD From (usft)	Operation F
1/10/2013	7:00	- 18:00	11.00	FRAC	36	В	Р		CONT PERF AND FRAC.
									FRAC STG 6) WHP 1443 PSI, BRK 2754 PSI @ 4.7 BPM. ISIP 1998 PSI, FG .0.67, CALC PERFS OPEN @ 51.9 BPM @ 4189 PSI = 100% HOLES OPEN. 0 ISIP 2567 PSI, FG .0.74, NPI 569 PSI. 0 MP 4903 PSI, MR 52.5 BPM, AP 4299 PSI, AR 51.7 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #7] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8338', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 7) WHP 1084 PSI, BRK 2764 PSI @ 4.7 BPM. ISIP 1721 PSI, FG .0.65, CALC PERFS OPEN @ 51.9 BPM @ 4559 PSI = 100% HOLES OPEN. 0 ISIP 2487 PSI, FG .0.74, NPI 766 PSI. 0 MP 4994 PSI, MR 52 BPM, AP 4258 PSI, AR 50.7 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #8] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=8056', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 8) WHP 1390 PSI, BRK 2459 PSI @ 4.7 BPM. ISIP 1900 PSI, FG .0.68, CALC PERFS OPEN @ 52.2 BPM @ 4006 PSI = 100% HOLES OPEN. 0 ISIP 2474 PSI, FG .0.75, NPI 574 PSI. 0 MP 4658 PSI, MR 53.2 BPM, AP 4147 PSI, AR 51.9 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7755', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 9) WHP 1393 PSI, BRK 2337 PSI @ 4.7 BPM. ISIP 1635 PSI, FG .0.65, CALC PERFS OPEN @ 52.2 BPM @ 4006 PSI = 100% HOLES OPEN. 0 ISIP 2395 PSI, FG .0.75, NPI 760 PSI. 0 MP 4658 PSI, MR 53.2 BPM, AP 4147 PSI, AR 51.9 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #9] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7755', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCEDURE, X OVER TO FRAC CREW.  FRAC STG 9) WHP 1393 PSI, BRK 2337 PSI @ 4.7 BPM. ISIP 1635 PSI, FG .0.65, CALC PERFS OPEN @ 52.3 BPM @ 4310 PSI = 96% HOLES OPEN. 0 ISIP 2395 PSI, FG .0.75, NPI 760 PSI. 0 MP 4648 PSI, MR 53.2 BPM, AP 4099 PSI, AR 52.2 BPM, PUMPED 30/50 OWATTA SAND.  PERF STG #10] P/U RIH W/ HALIBURTON 8K CBP & PERF GUN, SET CBP @=7545', PERF USING 3-1/8 EXPEND, 23 GRM, 0.36" HOLE. AS PERSAY IN PROCED

				Operat	tion Su	ımma	ry Report	
Well: MORGAN S	TATE 921-36J1C	GREEN	The state of the s				Spud Date: 9/9/2	2012
Project: UTAH-UII	HATV		Site: MOF	RGAN STA	ATE 921-3	6J PAD		Rig Name No: GWS 1/1
Event: COMPLET	ION		Start Date	: 1/4/2013	3			End Date: 1/23/2013
Active Datum: RK Level)	B @5,079.00usft (	above Mean S	ea	UWI: NV	V/SE/0/9/S	S/21/E/36	3/0/0/26/PM/S/211	8/E/0/1784/0/0
Date	Time Start-End	Duration (hr)	Phase	Code	Sub	P/U	MD From (usft)	Operation 型 公司系统
1/11/2013	7:00 - 18:00	11.00	FRAC	36	В	P	(200 44 C 200 - 20 3 Table 200 10 - 20 7 10 10 10 10 10 10 10 10 10 10 10 10 10	CONT PERRF AND FRAC.
								FRAC STG 10) WHP 821 PSI, BRK 2198 PSI @ 4.7 BPM. ISIP 1209 PSI, FG .0.6, CALC PERFS OPEN @ 52.3 BPM @ 3515 PSI = 100% HOLES OPEN. 0 ISIP 2026 PSI, FG .0.71, NPI 817 PSI. 0 MP 5436 PSI, MR 52.8 BPM, AP 3792 PSI, AR 52 BPM, PUMPED 30/50 OWATTA SAND.
								RIH W/ WIRELINE. SET HAL 8K CBP @7280' (KILL PLUG). SWI. FRAC COMPLETE. READY FOR D/O.
1/21/2013	12:00 - 17:00	5.00	DRLOUT	31	1	P		TOTAL SAND PUMPED = 305,822#  TOTAL FLUID PUMPED = 14,490 BBLS  MIRU, SPOT EQUIP, ND WH, NU 10K BOP, RU FLOOR  & TBG EQUIP, SPOT TBG TRAILER & INSTAL HAND  RAILS, PU 3 7/8" BIT, POBS, 1.875" XN S/N, TALLY
	7:00							& PU TBG TO 2,500', SWI, INSTAL TARPS & HEATER HOSES, DRAIN & WINTERIZE EQUIP, SDFN.
1/22/2013	7:00 - 7:15 7:15 - 16:00	0.25 8.75	DRLOUT DRLOUT	48 31		P P		HSM, SLIPS, TRIPS & FALLS, P/T BOP, D/O PLUGS
	7.10 - 16.00	6.75	DRLOUT	. <b>31</b>		۲		(TEMP -13 BELOW) TALLY & PU TBG, RU P/S, FILL TBG & BREAK CIRC, P/T BOP TO 4,500 PSI, TEST GOOD, SURFACE CSG VALVE OPEN & LOCKED, D/O PLUGS
								Č/O 20' ŠAND, TAG 1ŠT PLUG @ 7,280' DRL PLUG IN 12 MIN. 600 PSI INCREASE RIH, CSG PREŠŠ 0 PSI.
								C/O 25' SAND, TAG 2ND PLUG @ 7,545' DRL PLUG IN 11 MIN. 300 PSI INCREASE RIH, CSG PRESS 100 PSI.
								C/O 20' SAND, TAĞ 3RD PLUG @ 7,755' DRL PLUĞ IN 12 MIN. 400 PSI INCREASE RIH, CSG PRESS 100 PSI.
								C/O 25' SAND, TAG 4TH PLUG @ 8,056' DRL PLUG IN 10 MIN. 600 PSI INCREASE RIH, CSG PRESS 500 PSI.
								C/O 25' SAND, TAG 5TH PLUG @ 8,338' DRL PLUG IN 11 MIN. 500 PSI INCREASE RIH, CSG PRESS 400 PSI.
								EOT @ 8,422', LET WELL CLEAN UP FOR 30 MIN, SWI, DRAIN & WINTERIZE EQUIP, SDFN.
1/23/2013	7:00 - 7:15	0.25	DRLOUT	48		Р		HSM, SLIPS, TRIPS & FALLS, BLEEDING OFF PRESS, D/O PLUGS

#### Operation Summary Report

		Operation Summary	Report
Well: MORGAN STATE 921-36J1CS GREEN		Sp	ud Date: 9/9/2012
Project: UTAH-UINTAH	Site: MOI	RGAN STATE 921-36J PAD	Rig Name No: GWS 1/1
Event: COMPLETION	Start Date	e: 1/4/2013	End Date: 1/23/2013
Active Datum: RKB @5,079.00usft (above Mean S	Sea	UWI: NW/SE/0/9/S/21/E/36/0/0	/26/PM/S/2118/E/0/1784/0/0
Level)  Date Time Duration	- Phase -	Code Sub P/U	A COLUMN SALES AND A COLUMN SALE
Start-End (hr)	r nase	Code Sub P/U	MD From Operation (usft)
7:15 - 15:00 7.75	DRLOUT	44 C P	(TEMP -13 BELOW) SICP 2,900 PSI, OPEN & BLEED WELL, D/O REMAINING 5 PLUGS.
			C/O 20' SAND, TAG 6TH PLUG @ 8,631' DRL PLUG IN 12 MIN. 400 PSI INCREASE RIH, CSG PRESS 200 PSI.
			C/O 30' SAND, TAG 7TH PLUG @ 8,889' DRL PLUG IN 10 MIN. 500 PSI INCREASE RIH, CSG PRESS 250 PSI.
			C/O 30' SAND, TAG 8TH PLUG @ 9,105' DRL PLUG IN 11 MIN. 300 PSI INCREASE RIH, CSG PRESS 400 PSI.
			C/O 25' SAND, TAG 9TH PLUG @ 9,349' DRL PLUG IN 12 MIN. 400 PSI INCREASE RIH, CSG PRESS 400 PSI.
			C/O 30' SAND, TAG 10TH PLUG @ 10,136' DRL PLUG IN 10 MIN. 200 PSI INCREASE RIH, CSG PRESS 450 PSI.
			PBTD @ 10,516', BTM PERF @ 10,370', RIH TAGGED @ 10,340', C/O TO PBTD @ 10,516, 146' PAST BTM PERF W/ 331 JTS 2 3/8" P-110 TBG, LD 16 JTS, PU & STRIP IN TBG HANGER & LAND TBG W/ 315 JTS 2 3/8" P-110, EOT 10,003.26'.
			RD POWER SWIVEL, FLOOR & TBG EQUIP, ND BOPS, NU WH, DROP BALL TO SHEAR OFF BIT, LET BIT FALL FOR 20 MIN, P/T LINE TO HAL 9000 TO 4,500 PSI, NO VISIBLE LEAKS.
			TURN OVER TO FLOW BACK CREW, RD & MOVE TO NEXT WELL ON PAD.
			KB= 26' 4 1/16" CAMERON HANGER= .83' TBG DELIVERED 336 JTS 315 JTS 2 3/8" P-110 = 9,974,23' TBG USED 315 JTS POBS= 2.20' TBG RETURNED 21 JTS EOT @ 10,003,26'
			TWR= 14,490 BBLS TWR= 3,500 BBLS
15:00 - 15:00 0.00	DRLOUT	50	TWLTR= 10,990 BBLS  WELL TURNED TO SALES @ 1430 HR ON  1/23/2013. 1020 MCFD, 1920 BWPD, FCP 2200#, FTP
1/24/2013 7:00 -		50	1500#, 20/64" CK. WELL IP'D ON 2/1/13 - 1791 MCFD, 0 BWPD, 0 BOPD, CP 2335#, FTP 1566#, LP 105#, 24 HRS, CK 20/64

Project: UTAH - UTM (feet), NAD27, Zone 12N Site: UINTAH\_MORGAN STATE 921-36J PAD Well: MORGAN STATE 921-36J1CS

Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS

Section: SHL:

+N/-S

0.00

Design: MORGAN STATE 921-36J1CS (wp01)

Latitude: 39.991235 Longitude: -109.496339

+E/-W

0.00 145

GL: 5053.00 KB: 26' RKB + 5053 GL @ 5079.00ft (H&P 298) | TVDPath | MDPath | Formation | 1375.00 | 1377.43 | GREEN RIVER | 1673.00 | 1676.35 | BIRDS NEST | 2169.00 | 2174.18 | MAHOGANY MARKER | 4617.00 | 4625.39 | WASATCH | 7280.00 | 7288.42 | MESAVERDE | 9451.00 | 9459.44 | SEGO | 9516.00 | 9524.44 | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 1376.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100

WE	LL DETAILS: MORGA	N STATE 921-3	ej1cs	
Northing 26404.99	Ground Level: Easting 2061591.77	5053.00 Latittude 39.991235	Longitude -109.496339	Slot

CASING DETAILS									
TVD	MD	Name	Size						
2619.67	2626.36	8 5/8**	0						

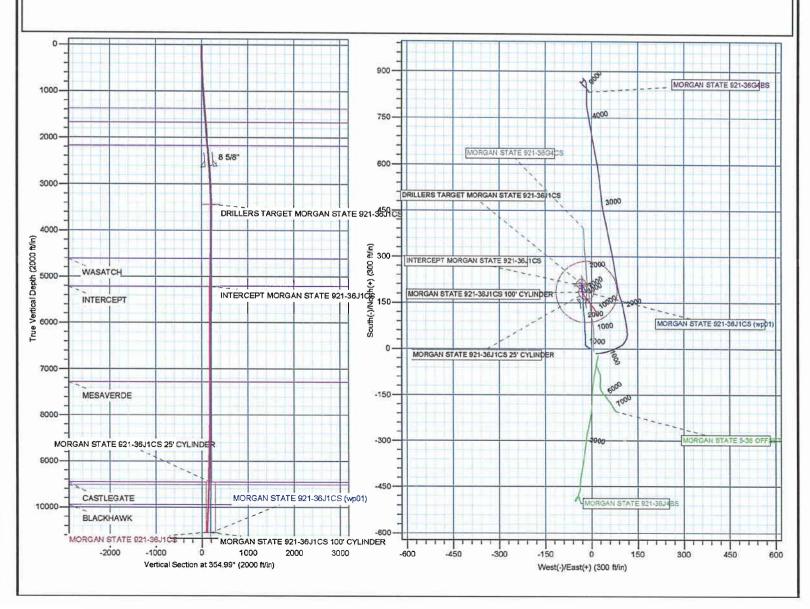


Azimuths to True North Magnetic North: 10.91

Magnetic Field Strength: 52201.8snT Dip Angle: 65.83° Date: 9/6/2012 Model: IGRF2010

DESIGN TARGET DETAILS											
Name DRILLERS TARGET MORGAN STATE 921-36J1CS INTERCEPT MORGAN STATE 921-36J1CS MORGAN STATE 921-36J1CS 25' CYLINDER MORGAN STATE 921-36J1CS 100' CYLINDER	TVD 3433.62 5217.00 9451.00 10545.00	+N/-S 212.27 205.65 185.38 185.38	+E/-W -32.89 -28.79 -16.81 -16.25	Northing 14526516.67 14526510.12 14526590.06 14526590.07	Easting 2061555.30 2061559.51 2061571.84 2061572.40	Latitude 39.991818 39.991800 39.991744 39.991744	-109.496442 -109.496399	Shape Circle (Radius: 15.00) Point Circle (Radius: 25.00) Circle (Radius: 100.00)			

SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
2640.00	4.04	354.69	2633.28	163.10	-28.32	0.00	0.00	164.94	
3240.00	4.04	354.69	3231.79	205.19	-32.23	0.00	0.00	207.22	
3442.00	0.00	0.00	3433.62	212.27	-32.89	2.00	180.00	214.33	
3527.44	0.26	148.25	3519.06	212.11	-32.79	0.30	148.25	214.16	
10553.45	0.26	148.25	10545.00	185.38	-16.25	0.00	0.00	186.09	



Project: UTAH - UTM (feet), NAD27, Zone 12N Site: UINTAH\_MORGAN STATE 921-36J PAD Well: MORGAN STATE 921-36J1CS

Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS

Section: SHL:

+N/-S

0.00

Design: MORGAN STATE 921-36J1CS (wp01)

Latitude: 39.991235 Longitude: -109.496339

+E/-W

0.00 145

GL: 5053.00 KB: 26' RKB + 5053 GL @ 5079.00ft (H&P 298) | TVDPath | MDPath | Formation | 1375.00 | 1377.43 | GREEN RIVER | 1673.00 | 1676.35 | BIRDS NEST | 2169.00 | 2174.18 | MAHOGANY MARKER | 4617.00 | 4625.39 | WASATCH | 7280.00 | 7288.42 | MESAVERDE | 9451.00 | 9459.44 | SEGO | 9516.00 | 9524.44 | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 9945.00 | 9953.44 | BLACKHAWK | CASTLEGATE | 1376.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 | 100

WE	LL DETAILS: MORGA	N STATE 921-3	ej1cs	
Northing 26404.99	Ground Level: Easting 2061591.77	5053.00 Latittude 39.991235	Longitude -109.496339	Slot

CASING DETAILS									
TVD	MD	Name	Size						
2619.67	2626.36	8 5/8**	0						

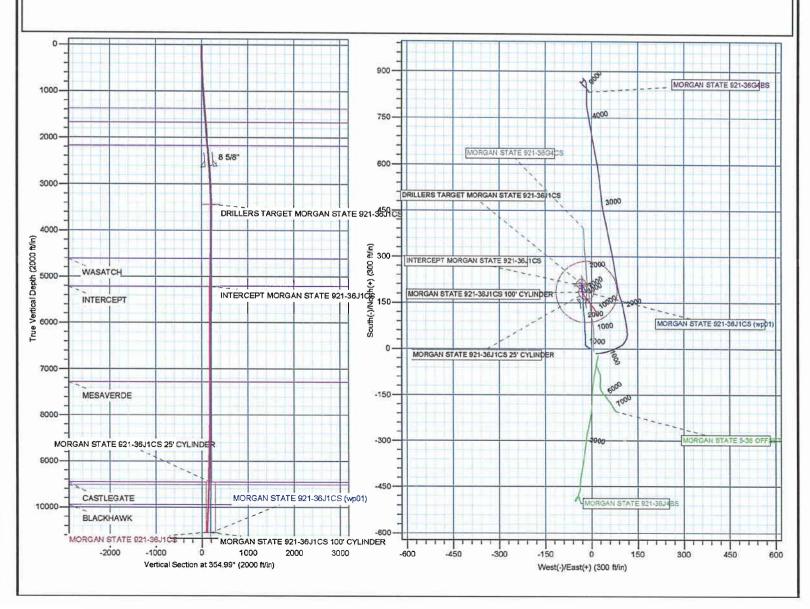


Azimuths to True North Magnetic North: 10.91

Magnetic Field Strength: 52201.8snT Dip Angle: 65.83° Date: 9/6/2012 Model: IGRF2010

DESIGN TARGET DETAILS											
Name DRILLERS TARGET MORGAN STATE 921-36J1CS INTERCEPT MORGAN STATE 921-36J1CS MORGAN STATE 921-36J1CS 25' CYLINDER MORGAN STATE 921-36J1CS 100' CYLINDER	TVD 3433.62 5217.00 9451.00 10545.00	+N/-S 212.27 205.65 185.38 185.38	+E/-W -32.89 -28.79 -16.81 -16.25	Northing 14526516.67 14526510.12 14526590.06 14526590.07	Easting 2061555.30 2061559.51 2061571.84 2061572.40	Latitude 39.991818 39.991800 39.991744 39.991744	-109.496442 -109.496399	Shape Circle (Radius: 15.00) Point Circle (Radius: 25.00) Circle (Radius: 100.00)			

SECTION DETAILS								
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
2640.00	4.04	354.69	2633.28	163.10	-28.32	0.00	0.00	164.94
3240.00	4.04	354.69	3231.79	205.19	-32.23	0.00	0.00	207.22
3442.00	0.00	0.00	3433.62	212.27	-32.89	2.00	180.00	214.33
3527.44	0.26	148.25	3519.06	212.11	-32.79	0.30	148.25	214.16
10553.45	0.26	148.25	10545.00	185.38	-16.25	0.00	0.00	186.09



# **US ROCKIES REGION PLANNING**

UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_MORGAN STATE 921-36J PAD MORGAN STATE 921-36J1CS

**MORGAN STATE 921-36J1CS** 

Survey: Survey #2

# **Standard Survey Report**

10 October, 2012

#### **Andarko Petroleum Corporation**

Survey Report

Company: US ROCKIES REGION PLANNING
Project: UTAH - UTM (feet), NAD27, Zone 12N
Site: UINTAH\_MORGAN STATE 921-36J PAD
Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Database:

Well MORGAN STATE 921-36J1CS 26' RKB + 5053 GL @ 5079.00ft (H&P 298) 26' RKB + 5053 GL @ 5079.00ft (H&P 298)

True
Minimum Curvature

edmp

Project UTAH - UTM (feet), NAD27, Zone 12N

Map System: Geo Datum:

Design:

Universal Transverse Mercator (US Survey Feet)

NAD 1927 (NADCON CONUS)

MORGAN STATE 921-36J1CS

System Datum:

Mean Sea Level

**Map Zone:** Zone 12N (114 W to 108 W)

Site UINTAH\_MORGAN STATE 921-36J PAD

Site Position: From:

Lat/Long

Northing: Easting: 14,526,383.50 usft 2,061,613.14 usft

Latitude: Longitude: 39.991175 -109.496264

Position Uncertainty:

0.00 ft

Slot Radius:

13-3/16 "

Grid Convergence:

09.49620 0.97 °

 Well
 MORGAN STATE 921-36J1CS

 Well Position
 +N/-S
 0.00 ft

Well Position +N/-S +E/-W

0.00 ft

Northing: Easting:

**g:** 14,526,404.99 usft : 2,061,591.77 usft Latitude: Longitude: 39.991235 -109.496339

Position Uncertainty

0.00 ft

Wellhead Elevation:

ft

Ground Level:

5,053.00 ft

5025000	Wellbore	MORGAN STATE 921-36J10	S Revenues transferantiation of president		en er en er en er en er en	
	Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle F (*)	ield Strength (nT)
ſ		IGRF2010	9/6/2012	10.91	65.83	52,202

Design MORGAN STATE 921-36J1CS **Audit Notes:** Version: 1.0 Phase: ACTUAL Tie On Depth: 22.00 Vertical Section: Depth From (TVD) +N/-S +E/-W Direction (ft) (ft) (ft) (°) 22.00 0.00 0.00 350.15

Survey Program 10/8/2012 From To (ft) (ft) Survey (Wellbore) **Tool Name** Description 189.00 2,640.00 Survey #1 (MORGAN STATE 921-36J1CS MWD MWD - STANDARD 3,790.00 10,550.00 Survey #2 (MORGAN STATE 921-36J1CS MWD MWD - STANDARD

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
2,640.00	4.04	354.69	2,633.28	163.10	-28.32	165.54	0.00	0.00	0.00
TIE ON					New Historia				
3,790.00	0.25	196.44	3,782.38	201.04	-32.78	203.69	0.37	-0.33	-13.76
FIRST MWD	SURVEY								
3,884.00	0.56	185.07	3,876.37	200.39	-32.88	203.06	0.34	0.33	-12.10
3,978.00	0.69	177.32	3,970.37	199.37	-32.89	202.05	0.16	0.14	-8,24
4,073.00	0.75	205.94	4,065.36	198.24	-33.14	200.98	0.38	0.06	30.13
4,167.00	0.88	178.32	4,159.35	196.96	-33.38	199.77	0.44	0.14	-29.38
4,262.00	1,00	177.82	4,254.34	195.40	-33.33	198.22	0.13	0.13	-0,53

#### **Andarko Petroleum Corporation**

Survey Report

North Reference:

Company: Project: Site: US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N UINTAH\_MORGAN STATE 921-36J PAD

Well: MORGAN STATE 921-36J1CS
Wellbore: MORGAN STATE 921-36J1CS
Design: MORGAN STATE 921-36J1CS

Local Co-ordinate Reference: TVD Reference: MD Reference:

Survey Calculation Method: Database: Well MORGAN STATE 921-36J1CS 26' RKB + 5053 GL @ 5079.00ft (H&P 298) 26' RKB + 5053 GL @ 5079.00ft (H&P 298)

True

Minimum Curvature

edmp

Measured Depth (ft)  4,356.00 4,451.00 4,545.00  4,640.00 4,743.00 4,837.00 4,932.00 5,026.00  5,120.00 5,215.00 5,309.00 5,404.00 5,498.00  5,592.00 5,687.00 5,781.00 5,876.00	clination				A CONTRACTOR OF THE STATE OF TH	eto a mare la lette representant		мициартиск импечес	kenetutajaan perengantaj	
4,356.00 4,451.00 4,545.00 4,640.00 4,743.00 4,837.00 4,932.00 5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00		Vertical			Vertical			Dogleg Build		
4,356.00 4,451.00 4,545.00 4,640.00 4,743.00 4,837.00 4,932.00 5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00		Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Turn Rate	
4,451.00 4,545.00 4,640.00 4,743.00 4,837.00 4,932.00 5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(°/100usft)	(°/100usft)	(°/100usft)	
4,545.00  4,640.00 4,743.00 4,837.00 4,932.00 5,026.00  5,120.00 5,215.00 5,309.00 5,404.00 5,498.00  5,592.00 5,687.00 5,781.00	1.25	172.32	4,348.32	193.57	-33.16	196.39	0.29	0.27	-5.85	
4,640.00 4,743.00 4,837.00 4,932.00 5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,687.00 5,781.00	1.44	168.82	4,443.30	191,37	-32.79	194,16	0.22	0.20	-3.68	
4,743.00 4,837.00 4,932.00 5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,687.00 5,781.00	0.56	191.57	4,537.28	189.76	-32.66	192.55	1.01	-0.94	24.20	
4,837.00 4,932.00 5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.75	194.94	4,632.27	188.70	-32.91	191.55	0.20	0.20	3.55	
4,932.00 5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.69	183.94	4,735,27	187.43	-33,13	190.34	0.15	-0.06	-10.68	
5,026.00 5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.81	191,19	4,829.26	186.22	-33.29	189.17	0.16	0.13	7.71	
5,120.00 5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.38	24,19	4,924.26	185.85	-33,30	188,80	1.25	-0.45	-175.79	
5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.31	25.82	5,018.25	186.36	-33.06	189.27	0.08	-0.07	1.73	
5,215.00 5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.19	26.57	5,112.25	186.73	-32.88	189.60	0.13	-0,13	0.00	
5,309.00 5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.19	54.44	5,207.25	186.96	-32.68	189.80	0.13	-0, 13 0,00	0.80 29.34	
5,404.00 5,498.00 5,592.00 5,687.00 5,781.00	0.19	91.07	5,301.25	187.05	-32.40	189.83	0.10	0.00		
5,498.00 5,592.00 5,687.00 5,781.00	0.22	114.66	5,396.25	186.97	-32.40	189.70	0.13	0.00	38.97	
5,687.00 5,781.00	0.25	132.07	5,490.25	186.76	-32.07	189.44	0.08	0.03	24.83 18.52	
5,687.00 5,781.00	0.38	135.82	5,584.25	186.40	_21 20	190.00	0.14	0.44		
5,781.00	0.50	133.62	5,679.25	185.88	-31.39 -30.87	189.02	0.14	0.14	3.99	
	0.63	133.69	5,679.25 5,773.24			188.42	0.13	0.13	-1.19	
0,070.00	0.69	139.82	5,773.2 <del>4</del> 5,868.24	185.23	-30.21	187.67	0.14	0.14	-1.06	
5,970.00	1.00	142.82	5,868.2 <del>4</del> 5,962.23	184.44 183.35	-29.46 -28.60	186.76 185.54	0.10 0.33	0.06 0.33	6.45 3.19	
6.064.00	0.75		·							
6,064.00	0.75	14.19	6,056.22	183.29	-27,95	185.37	1.68	-0.27	-136.84	
6,159.00	0.88	15.07	6,151.21	184.60	-27.61	186.60	0.14	0.14	0.93	
6,254.00	0.56	20.69	6,246.20	185.74	-27.26	187.66	0.34	-0.34	5.92	
6,348.00	0.38	42.19	6,340.20	186.40	-26.89	188.25	0.26	-0.19	22.87	
6,442.00	0.31	100.69	6,434.20	186.58	-26.43	188.35	0.36	-0.07	62.23	
6,537.00	0.50	136.94	6,529.20	186,23	-25.89	187.92	0.33	0.20	38.16	
6,631.00	0.75	292.82	6,623.19	186.17	-26.18	187.91	1.30	0.27	165.83	
6,726.00	0.81	280.07	6,718.19	186.53	-27.41	188.47	0.19	0.06	-13.42	
6,820.00	0.56	268.69	6,812.18	186.64	-28.53	188.76	0.30	-0.27	-12.11	
6,915.00	0.50	262.57	6,907.17	186.57	-29.40	188.85	0.09	-0.06	-6,44	
7,010.00	0.13	249.57	7,002.17	186.48	-29.91	188.85	0.39	-0.39	-13.68	
7,104.00	0.38	229.32	7,096.17	186.24	-30.25	188.67	0.28	0.27	-21.54	
7,199.00	0.31	199.69	7,191.17	185.79	-30.57	188,28	0.20	-0.07	-31,19	
7,293.00	0.44	189.44	7,285.17	185.20	-30.72	187.72	0.16	0.14	-10.90	
7,388.00	0.50	358.44	7,380.17	185.25	-30.79	187,79	0.98	0.06	177.90	
7,482.00	0.06	48.69	7,474.17	185.69	-30.76	188.22	0.49	-0.47	53.46	
7,576.00	0.25	136.32	7,568.17	185.58	-30.59	188.07	0.27	0.20	93.22	
7,671.00	0.69	143.94	7,663.16	184.97	-30.11	187.39	0.47	0.46	8.02	
7,765.00	1.19	144.57	7,757.15	183.71	-29.21	186.00	0.53	0.53	0.67	
7,860.00	1.31	152.32	7,852.13	181.95	-28.13	184.08	0.22	0.13	8.16	
7,954.00	1,51						0.04			
8,048.00		150 44	7 0/6 10	170 22	_ 22 27					
8,143.00	1.63	150.44	7,946.10	179.83	-26.97	181.80	0.34	0.34	-2.00	
8,237.00	1.63 1.69	153,32	8,040.06	177.43	-25.69	179.21	0.11	0.06	3.06	
8,332,00	1.63									

#### **Andarko Petroleum Corporation**

Survey Report

Company: Project: Site:

Well:

US ROCKIES REGION PLANNING UTAH - UTM (feet), NAD27, Zone 12N UINTAH MORGAN STATE 921-36J PAD

MORGAN STATE 921-36J1CS MORGAN STATE 921-36J1CS

Wellbore: MORGAN STATE 921-36J1CS
Design: MORGAN STATE 921-36J1CS

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Database:

Well MORGAN STATE 921-36J1CS

26' RKB + 5053 GL @ 5079.00ft (H&P 298) 26' RKB + 5053 GL @ 5079.00ft (H&P 298)

True

Minimum Curvature

edmp

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,426.00	1,44	145.07			and the state of				
8,520,00	0.88	145.07	8,417.93 8,511.91	169.48 167.91	-20.16	170.43	0.27	0.27	0.00
8,615.00	0.00	161.69	•		-19.09	168.70	0.60	-0.60	1.99
8,709.00	1.19	140.44	8,606.90	166.56	-18.45	167.26	0.25	0.06	15.53
8,804.00			8,700.88	165.07	-17.58	165,65	0.49	0.27	-22.61
8,804.00	1.50	132.69	8,795.86	163.47	-16.04	163.80	0.38	0.33	-8.16
8,899.00	1.50	141.19	8,890.82	161.66	-14.35	161.73	0.23	0.00	8.95
8,993.00	1.69	139.57	8,984.79	159.64	-12.68	159,46	0.21	0.20	-1.72
9,088.00	1.94	144.69	9,079.74	157.26	-10.84	156.80	0.31	0.26	5.39
9,182.00	1.88	139.57	9,173.69	154.79	-8.92	154.04	0.19	-0.06	-5.45
9,276.00	2.00	136.19	9,267.63	152.44	-6.78	151.35	0.18	0.13	-3.60
9,371.00	1.69	136.44	9,362.58	150.22	-4.67	148.81	0.33	-0.33	0.26
9,465.00	2.00	151.44	9,456.54	147.78	-2.93	146.10	0,61	0.33	15.96
9,749.00	2.44	143.69	9,740.32	138.55	3.02	136.00	0.19	0.15	-2.73
10,032.00	2.56	147.69	10,023.05	128.36	9.96	124.76	0.07	0.04	1.41
10,127.00	2.63	151.32	10,117.96	124.65	12.14	120.74	0.19	0.07	3.82
10,488.00	2.81	153.82	10,478.55	109.45	20.02	104.41	0.06	0.05	0.69
LAST MWD	SURVEY								
10,550.00	2.81	153.82	10,540.47	106.72	21.36	101.49	0.00	0,00	0,00

Survey Annotations	educiyadır. (C. 1864 ilkili) (C. 1821) (C.		year da juli-Leiter tette Leiter Politica	ar en mantende mentende de la lactura de la companya de la lactura de la lactura de la lactura de la lactura d
Measured	Vertical	Local Coord	nates	
Depth	Depth	+N/-S	+E/-W	
(ft)	(ft)	(ft)	(ft)	Comment
2,640.00	2,633.28	163.10	-28.32	TIE ON
3,790.00	3,782.38	201.04	-32.78	FIRST MWD SURVEY
10,488.00	10,478.55	109.45	20.02	LAST MWD SURVEY
10,550.00	10,540.47	106.72	21.36	PROJECTION TO TD

Checked By:	Approved By:	Date	:
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